Cyberbullying among youths in Hong Kong, Macao and Guangzhou

Lapman Wan

UNIVERSITY OF BRISTOL

Graduate School of Education

A dissertation submitted to the University of Bristol

in accordance with the requirements of

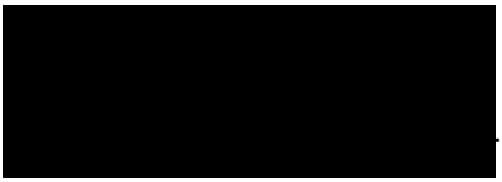
the degree of Doctor of Education (EdD)

in the Faculty of Social Science and Law

April, 2018

Declaration

I declare that the work in this dissertation was carried out in accordance with the requirements of the University's Regulations and Code of Practice for Research Degree Programmes and that it has not been submitted for any other academic award. Except where indicated by specific reference in the text, the work is the candidate's own work. Work done in collaboration with, or with the assistance of, others, is indicated as such. Any views expressed in the dissertation are those of the author.

SIGNE  . DATE:.....16th May,2018.....

Dedication

To God the Father, the Son and the Holy Spirit in whose strength I stand.

To my parents for their endless love and encouragement.

To my brilliant and supportive wife, sweet and kind-hearted sons

Acknowledgement

There are numbers of people that I must gratefully acknowledge and thanks for their contribution in various ways, to help me through the six years academic journey.

I would like to show my deepest gratitude to Helen Manchester and Shelley Mckeown Jones. They are my supervisors and angels in my road to knowledge. My heartfelt thanks to their support, patience, concern, wisdom and comments. Special thanks to Prof. Harvey Goldstein and Dr. George Leckie, who guided me to work out and applied multi-level modeling in my data analysis.

My gratitude to all the partners and helpers in Guangzhou, Macao and Hong Kong who participated in this study, to thank for their generous support in the preparatory period and the data collection. Without their wholehearted support, this study will never be a success.

I must show my deepest gratitude to my family. My lovely wife Fong Fong, who has been so patient and supportive in my years of study, I must thank her for taking up some of the roles that I should have shoulder as a father. Thanks to my sons Kin, Kit and Chun, who have been so understanding and study together with me day and night.

Special thanks to Dr. Anora, Dr. Cora who helped me so much and provided useful suggestions in my study. My earnest thanks to Kenneth and my buddies who organized study trips in Bristol and study group in Hong Kong. Last but not least, I would like to thank all the staffs of the Bristol EdD programme who have supported and helped in my study.

Contents

List of Tables

List of Figures

Abstract

Nowadays, online activities are a significant part of teenagers' daily lives worldwide. Increasing local news reports on cyberbullying have raised public concern. Previous studies of cyberbullying in Chinese contexts are limited in scope and number. This thesis seeks to understand, cyberbullying among young people in Chinese society. It is hoped that the findings can lead to more service initiatives enabling young people to live better in a world where cyberbullying exists.

A mixed method research design from an ecological systems perspective was applied to collect both qualitative and quantitative data for analysis. In this study, cyberbullying case interviews were conducted. Three stages and ten common types of cyberbullying were identified. The escalation of cyberbullying was illustrated to show the development of conflict. Characteristics of cyberbullying, such as privacy, digital tracking, identity, playfulness, and role diffusion were discussed. The findings showed that cyberbullying had actual impact on the life and behaviour of young people. A cyberbullying behaviour checklist was developed informed by the case study and literature to measure the cyberbullying prevalence rate.

A survey of 2,185 young people form Hong Kong, Macao and Guangzhou was completed in 2016. Considerable cyberbullying was observed, with a prevalence of 71% for victims and 63.7% for perpetrators. No significant relationship was found between young people's cyberbullying behaviour and their personal skills, resources, and societal and ecological factors. The multi-level modelling analysis of the three cities' data showed no significant different among factors predicting cyberbullying. This supports that the idea that cyberbullying is a universal threat to young people.

The study findings showed that a subject's behaviour pattern in the cyberworld is significant correlated with cyberbullying. The findings indicated a strong positive relationship between perpetrator behaviour and being a victim of cyberbullying. The findings highlighted the detrimental psychological impact that cyberbullying has on both perpetrator and victim. This supports the view that everyone involved is a victim and suffers from different degrees of psychological harm. Moreover, this research identified a positive role for schools and families in helping young people to overcome and recover from cyberbullying incidents.

As a result of these investigations, suggestions for future research and service implications for cyberbullying prevention were made, such as more training for teachers, social workers and parents to enhance early identification and intervention in cyberbullying incidents. The low help-seeking rate implied that more education programmes on cyberbullying prevention and supportive services can be a helping hand for young people suffering from cyberbullying.

Keywords: Cyberbullying, Prevalence, Chinese

Chapter One: Introduction

While human interactions in the cyberworld have developed rapidly over the past decade, the public has become more concerned about aggressive behaviour on the Internet (Rost, Stahel, & Frey, 2016). In news and the media, the term 'cyberbullying' was first used in New York Times news coverage in 2003 (Times, 2014). Globally, an increasing number of articles and news reports have covered cyberbullying since then. For example, two young girls, Jessica Logan and Hope Sitwell, hanged themselves in the US after experiencing 'sexting' and 'outing' of their nude photos to hundreds of students in their community. The cyberbullying continued through Facebook, MySpace and text messages (Cooper, 2012). According to the National Bullying Prevention Center, 20% of high school students in the US have experienced cyberbullying (National Center for Education Statistics, 2015). In Hong Kong, the numbers of cyberbullying incidents and counselling cases have increased dramatically recently (Leung et al., 2016). The purpose of this study was to examine the nature, prevalence and impact of cyberbullying in Chinese context.

This chapter outlines the philosophical thinking, background, assumptions and goals behind the research, and the research questions regarding this study.

Background

Cyberbullying is a modern word recently added to the Oxford dictionary since 2011 (Stevenson, 2015). Olweus (2012) broadly defines cyberbullying as bullying via electronic means. This is a global phenomenon with the potential to affect the psychological health of young people (Bauman, Toomey, & Walker, 2013; Campbell, Slee, Spears, Butler, & Kift, 2013; Gámez-Guadix, Orue, Smith, & Calvete, 2013; Hinduja & Patchin, 2010a).

The study on Cyberbullying among Chinese young people is relatively rare and mainly focus on quantitative side. A comprehensive study on Chinese Cyberbullying are essential in helping our society to tackle the issue in a proper way. Moreover, the Guangdong-Hong Kong-Macao Bay Area is nation social development policy in the near future(China, 2017). The researcher's services network in Hong Kong, Macao and Guangzhou can facilitate a cyberbullying comparative study on the three cities, which can benefit the social services development and cooperation among NGOs.

Although Hong Kong, Macao, and Guanzhou are Chinese cities with same languages, the cyberbullying prevalence rate are different in pervious study (Wan, 2014). Hong Kong was British Colony and under British Crown rule from 1841 to 1997. Then, British government transferred sovereignty of the entirety of Hong Kong back to People Republic of China in 1997. However, the Hong Kong law system, under the principle of 'one country, two systems', which is different from that of China and based on the common law, supplemented by written law (China, 1990). While Macao also a former Portuguese colony since 1887, it was returned to Chinese sovereignty in 1999. Like Hong Kong, as a Special Administration Region, the Portuguese civil law system in Macao was preserved after 1999 (China, 1993). The British and Portuguese long-time administration in Hong Kong and Macao resulted cultural and system difference from other cities in China.

Other than culture and law system, the Internet policy and rules are different among the three cities. China has a unique Internet environment and policy which are different from other parts of the World so as Hong Kong and Macao. The Great Firewall of China, operated under the China Ministry of Public Security's "Golden Shield Project" (Liang, 2002). The firewall blocked social media and websites such as Facebook, Pinterest, YouTube and Google in Mainland China (Winter & Crandall, 2012), with only local Internet services available, such as WeChat, QQ (Social

Media) and Baidu (Chinese search engine), while the blocked Internet services are very popular among young people in Hong Kong and Macao, as the cities operate under different law systems from Mainland China (China, 1990, 1993). Furthermore, all website and Internet user in China must be registered according the order promulgated by Decree No. 33 of the Ministry of Public Security (China, 1997). Hong Kong and Macao are not required in the same measures. The discrepancy may have influenced the young people's behaviour patterns in the cyberworld.

In the light of the above reasons, the different law system, unique Internet environment, it is worth studying the latest developments of cyberbullying among young people in the three cities, especially in a Chinese context, to provide information and service direction for our society to offer help to affected teenagers.

Researcher Experience Leading to this Study

I am a social worker and have served at-risk youth in Hong Kong for over 25 years. Typical service needs of my clients included dropping out of school, running away from home, teenage pregnancy, drug abuse, gang fight and Triad involvement. From my experience in fieldwork with youth, I share the view of Chui and Chan (2012) that youth are greatly affected by social and environmental factors, both positively and negatively, as well as being positive and negative contributors to their social environment. On the other hand, young people can also be the agent of change in undesirable environments. The mandate of our service is facilitating young people to grow up with better adaptation to adverse situations (Hong Kong Council of Social Service, 1988). According to the client profile and service description of outreach social work service provided by Hong Kong Council of Social Service, the targeted clients come from backgrounds of low socio-

economic status, from a divorced family, from a community with undesirable peer influence and without proper guidance and support from either parents or teachers (Hong Kong Council of Social Service, 1988).

Bullying has been a key concern of the service for some time, and we started a study on bullying behaviour among young people in 2008 (Wan, 2008). As the perpetrators demonstrated psychologically and emotionally unstable situations, we launched a pilot service project named "No more bullying" for perpetrators (HKPA, 2008, p. 42). The project utilised drama as a means for the perpetrator to understand their hurt of the victim through preparing for a drama performance in a local school to promote a "Stop bullying" message. In the process, we found that the venue and means of bullying are transforming with changes in technology. Then, I surveyed cyberbullying in our service networks in Hong Kong, Guangzhou and Macao in 2014. A total of 2,460 adolescents were interviewed to collect information about their bullying experience. At-risk youth were found to have a higher cyberbullying prevalence rate than non at-risk youth, with both perpetrators and victims suffering from higher anxiety and depression levels (Wan, 2014). This study can provide a more comprehensive illustration of cyberbullying in Chinese society. In the meantime, smartphone usage has increased drastically in the last three years. Hong Kong has the highest broadband speeds and penetration rates in the world and was ranked first in the latest GFK Connected Consumer Index among 78 countries and eight regions (Yip, 2016). At the same time, the number of our counselling cases related to cyberbullying is increasing substantially (HKPA, 2015). The shape contrast between a harmony emphasising culture, super Internet coverage, and high cyberbullying prevalence shows a complex interaction contributing to the phenomenon. Although we did not understand the phenomenon well in the existing social environment, as a social worker, a practical solution to help these young people was a pressing need. The strong

service need urges more understanding of the phenomenon and the latest information for service planning and implementation.

Pragmatist Epistemology

This study adopts pragmatism as its philosophical stance. The real world is complicated and human behaviour cannot be easily classified as a simple duality: the physical world, as well as social, psychological, cultural and environmental factors are important and have a variety of impacts on young people.

The pragmatic paradigm is more focused on the practical issues required to handle the identified problem. The research problem is the main focus; different measures and approaches will be adopted to provide an understanding of the problem (Creswell, 2013).

The focus of this study are the teenagers who are affected by cyberbullying. The methods of data collection and analysis have been selected to best answer the research question with no paradigm or philosophical loyalty (Mackenzie & Knipe, 2006). Another key reason for using the pragmatic paradigm is that it allows the use of different data collection methods; the variation in data collection provides greater validity (Jick, 1979). In addition, the different sources of data can reduce researcher bias and gaps in the information collected (Johnson & Onwuegbuzie, 2004). The use of different measures on the same concept can provide a more comprehensive assessment and description of cyberbullying. Further discussion on the research design is presented in Chapter Three.

Significance of the Study

Although the information technology infrastructure has been well-developed in Hong Kong, only a few local studies on cyberbullying are available. The existing pilot service projects for cyber youth work are mainly based on Western studies; these projects are trying to engage vulnerable young people in the cyberworld (Leung et al., 2016). The service mode is very labour-intensive: social workers do manual searches through blogs, social media and forums to look for warning signals among young people (Yip, 2016).

Cyberbullying as a significant service need has been identified within the Hong Kong Chinese community. This study can provide more in-depth and updated information for NGOs to better serve young people suffering from cyberbullying. It is worth understanding the nature of cyberbullying in the local context by considering its impacts on young people and the interaction with surrounding systems. Moreover, the findings can help us to identify high-risk groups in cyberbullying. This can support those in the helping professions to practise early intervention in cyberbullying cases. Finally, this research can act as the basis for further academic study on cyberbullying among Chinese teenagers. The instrument developed to measure cyberbullying prevalence rates in this study can provide a reference for measuring cyberbullying on a wider scale in Chinese society.

In order to reduce research bias, triangulation of data sources increases the credibility and validity of a study (Jick, 1979). The mixed method allows multiple viewpoints and data sources for greater accuracy and credibility (Creswell, 2013; Tashakkori & Teddlie, 2010). Also, this is a cross-city study on cyberbullying based on our existing service network. It is expected to explore the nature and impact of the social phenomenon in Chinese society. This provides a benchmark and reference for NGOs and government to determine service needs and resource allocation.

Research Goal

The ultimate goal of this study is not just to find out the reality, but also to change it, therefore enabling young people to live better in a world where cyberbullying exists (Creswell, 2013, p. 12).

As a social work practitioner and researcher, my primary interest in cyberbullying incidents is the potential effect on young people's welfare. One of the core mandates for social workers is the promotion of social change (International Federation of Social Workers, 2014). It is a core vision to cultivate a better social environment for our young people to grow up in a healthy and safe society. This is a transformative social change process to induce broad-based social change and social justice; and it also suggests that the undesirable behaviour of individuals is a direct expression of a larger tear in our society (Utting, Razavi, & Buchholz, 2012; G. Williams, Horwitz, Claudia; Vega-Frey, Jesse; Maina, Ng'ethe; Haines, Staci K., 2010). Gass (2010, p. 12) adds that transformative social change requires a holistic approach: it aims to mobilise people's minds and behaviour, as well as social systems, to bring an improvement in society.

Therefore, the study should not only focus on aggressive behaviour among young people in cyberworld, but also the surrounding environment and systems that influence the subject. Moreover, close collaboration between researcher and practitioners can promote change within social service organisations (Gray, 2013). The new service need can be better satisfied by integrating the research results into service design and planning. As a social work practitioner and researcher, the insider-outsider role facilitates the study, for example better understanding young people's language, having more knowledge of their needs and concerns, and easily obtaining permission to collect data and service records (Coghlan, 2003; Unluer, 2012). On the other hand, the role duality of the researcher may result in overlooking routine behaviour and making

assumptions about the phenomenon and participants; the participants may think the data collection is included in the service session. (Unluer, 2012). This limitation can be reduced by more researcher reflexivity and proper informed consent during the research implementation process. In terms of the research's ethical considerations, a detailed description of the measures to protect the participants' rights are presented in Chapter Three.

Returning to the goal, it is now possible to state that this study can provide a comprehensive interpretation of the study findings and the implications for service development. This can inform our service direction and help us to design specific service projects directly addressing the service needs of young people being affected by cyberbullying.

In short, this research is an attempt to understand more of the phenomenon, helping young people affected by cyberbullying. The findings from this study are provided as a reference for service planning and delivery. The existing service for young people experiencing cyberbullying in Hong Kong is mainly at the remedial level; only serious cases have been referred from schools or parents. The study results can enable the helping professions to tackle the problem in a more proactive manner. Early identification and intervention can be achieved with sufficient knowledge and understanding of cyberbullying in the local context. Moreover, the rich and updated information collected from this study can inform existing education programmes (school talks, exhibitions and interactive drama) to prevent cyberbullying, and this is useful for enhancing our promotion of anti-cyberbullying messages in local schools (HKPA, 2012, 2015). These follow-up actions are out of the scope of the study; only related information is included in this thesis.

Methodology

As multiple data sources were collected in this study, mixed methods were adopted to incorporate both qualitative and quantitative data for greater accuracy and credibility (Creswell, 2013b; Tashakkori & Teddlie, 2010). The triangulation of data can reduce research bias, and multiple sources increase the credibility and validity of a study (Jick, 1979).

With the aim of understanding the experiences of young people involved in cyberbullying, I draw upon the work of Moustakas (1994), who suggested phenomenological research could dig out the essence of human experiences concerning a phenomenon: the study should return to the experience of participants to extract comprehensive descriptions of the phenomenon. He also suggests the importance of social meanings, personal and professional values for the study. The personal experience of young people in cyberbullying incidents should be addressed throughout this study. In this study, the young people were asked to describe their experience of cyberbullying, including their feeling, memories and drawings along with their journey in the cyberworld.

Hammersley (2000) further points out that phenomenological researchers cannot be separated from their own presuppositions. Moreover, phenomenology proposes that people's experiences of that social phenomenon are the foundation for understanding social reality. It is one of the methods for exploring different views of a phenomenon (Gray, 2013). This supports the use of a wider perspective in studying cyberbullying instead of focusing on the behaviour itself.

Furthermore, the prevalence of cyberbullying is essential data for service planning and resource allocation. Quantitative data can help the researcher to estimate service need in the local community. The measurement and estimation of the features and characteristics of cyberbullying can also be achieved with a literature review of previous studies. Therefore, both qualitative and quantitative data are required to achieve the goal of this study. Moreover, the application of mixed

methods can complement the strengths and overcome the weaknesses of a single design. Besides this, it can address a theoretical perspective or question at different levels (Creswell, 2013). Thus, it is worth examining cyberbullying through both quantitative and qualitative lenses.

As a helping profession, social workers are supposed to be primarily accountable to our service users (International Federation of Social Workers, 2014). However, the Hong Kong government and social services section has employed a neoliberal welfare ideology since 2000, where the New Management model encourages market-orientation, competition and cost effectiveness in social services (J. C. Leung, 2002). Therefore, the social worker is accountable to four stakeholders, including the client, the profession, the employing organisation and the government in the existing Hong Kong welfare system (Yan, Cheung, Tsui, & Chu, 2015). The local social work profession needs to stay reflexively critical with service development through both qualitative and quantitative lenses to pursue support from all stakeholders. Young people's direct experience of cyberbullying was collected as a first-hand data source for this study. The quantitative survey data allows the use of statistical analysis to measure the magnitude and significance of the factors related to cyberbullying. This enables the study to generalise the qualitative data to a certain degree (Creswell, 2013). Hence, it is essential to position this cyberbullying study in a transformative framework for designing a better supportive service for young people. In accordance with the research goal, this study adopted a sequential transformative mixed method design to explore the cyberbullying phenomenon; an initial phase of qualitative data study followed by a phase of quantitative data collection and analysis. The results and analysis are integrated into the discussion (Creswell, 2013). Moreover, triangulation was adopted to enhance the research credibility. The research design is further elaborated in Chapter Three.

Research Questions

This study was divided into two phases. In Phase One, the researcher explored the nature and context of cyberbullying in Chinese society using qualitative research. In Phase Two, building on the findings from Phase One, quantitative data was collected to measure the prevalence and psychological impacts on young people. The main obstacles of mixed methods research are time and resources; the researcher needs to collect at least two sets of data through two sets of research questions addressing different natured questions (Hanson, Creswell, Clark, Petska, & Creswell, 2005). In addition, the design of the research questions is more complex in mixed methods research, as a question appropriate for one method may be inappropriate for another (Gray, 2013). In this study, some research questions were deliberately designed to be broad enough to cover the data collected from both methods, but some could only be looked at through one method.

To fulfil the research goals and, at the same time, provide a comprehensive understanding of cyberbullying among young people in Chinese society, the following research questions are focused on throughout this study:

RQ1: What are the experiences of Chinese young people in cyberbullying?

RQ2: What is the prevalence of cyberbullying among Chinese young people?

RQ3: What are the significant factors affecting cyberbullying behaviour?

RQ4: What are the impacts of cyberbullying on young people?

The first research question (RQ1) is concerned about the current cyberbullying identified among Chinese young people. The question was addressed in Phase One by a qualitative inquiry method. Informed by the Phase One findings on RQ1, Phase Two of this study answered RQ2 using quantitative data only. The second question measures cyberbullying's prevalence in Chinese

cities. It involved developing a tool for measuring cyberbullying in the communities specified. The third question identifies the factors affecting cyberbullying among young people: the significant factors identified in the quantitative data were further examined through the case studies' qualitative data. The personal, social and environmental factors were incorporated to identify the importance of the impacts of cyberbullying. The fourth question (RQ4) examines the impacts of cyberbullying on young people, and both quantitative and qualitative data were collected in different phases of this study.

Organisation of the Thesis

This thesis is presented in seven chapters. The research background and overview of the study are described in Chapter One. Chapter Two reviews the literature on cyberbullying, particularly the definition, cyberbullying behaviours, digital culture and digital life among young people. The measurement of cyberbullying and its prevalence rate are also important elements in this chapter. Subsequently, the psychological states and personal and situational factors affecting cyberbullying, as well as the roles of participation in cyberbullying, are reviewed.

Chapter Three outlines the research methodology and mixed methods adopted for this study. Research reliability, validity and ethical issues are discussed and addressed. Chapters Four and Five present the implementation, inquiry method, and results of the qualitative and quantitative study in detail. Chapter Six discusses the findings with the results from both phases of the study to identify the phenomena and suggest appropriate services for helping the young people affected by Cyberbullying. Chapter Seven summarises and concludes the essential results, importance and implications from the study. Finally, recommendations for practitioners and future research are suggested.

Chapter Two: Literature Review

In this chapter, the most relevant and recent research is explored critically to provide a foundation for this study. The definition and development of cyberbullying is discussed first. Then, a comprehensive review on culture, gender influence, role differences between perpetrator and victim, and technology area in pervious cyberbullying studies. The digital culture is further examined in online privacy and perceived anonymity. Next, different theoretical frameworks applied in previous studies on cyberbullying and the application of the ecological framework for this study are discussed.

Then, the measurement of cyberbullying prevalence, psychological impacts resulting from cyberbullying, and the help seeking behaviour of young people in cyberbullying are reviewed. The final section highlights trends in cyberbullying and the rationale of this study. In the following paragraphs, for the simplicity of discussion, the term ‘bullying’ refers to traditional bullying, and ‘cyberbullying’ refers to bullying by using any information communication technology.

Studies on Cyberbullying

Cyberbullying as a social phenomenon has developed along with the Internet era, and there have been many studies and discussion in the academic literature over the last few years. As technology advances, the means of bullying have evolved and bullies today may use the Internet rather than their fists, thus expanding bullying behaviour into the cyberworld. This has become known as cyberbullying. However, there is only very limited research on the topic in the Chinese context, and more discussion can be found in the section on the rationale for the current research (see p. 59).

To identify the major perpetrators of online harassment and solicitation, the National Center for Missing and Exploited Children in the US conducted a study of cyberbullying in 2000. This was the first specific study regarding cyberworld bullying. According to Finkelhor, Mitchell, and Wolak (2000), among the 1,501 interviewed young people in the US, over 60% of harassment perpetrators were other juveniles. This study, as the first indication of cyberbullying behaviour, suggested that children were the perpetrators as well as the victims in cyberworld harassment.

In the search for relevant studies, fourteen academic databases, including the Australian Education Index, British Education Index, British Periodicals, ERIC, International Bibliography of the Social Sciences (IBSS), MLA International Bibliography, Periodicals Archive Online, PILOTS: Published International Literature On Traumatic Stress, ProQuest Dissertations & Theses: UK & Ireland, Social Services Abstracts, and Sociological Abstracts, were utilised. Among the search results, the term ‘cyberbullying’ first appeared in a study of student harassment with the new technology as a bullying weapon (Shariff, 2004). Up until 2016, a total of 2,925 academic papers including the term ‘cyberbullying’ have been published (ProQuest, 2016).

Cyberbullying prevalence rate was one of the focus of the studies. The rate measured for the perpetrator and victim aspects as a benchmark to show the magnitude of the phenomena (Barlett, 2015; Hamburger, Basile, & Vivolo, 2011; Levy et al., 2012). Given that previous research has shown that the prevalence rate of cyberbullying ranges from 10% to 40% (Kowalski et al., 2012). A latest meta study on 58 empirical researches on cyberbullying comparing the prevalence rate in the US, the victim prevalence rate ranged from 3% to 72% (Selkie, Fales, & Moreno, 2016). Another study in six European countries found that the cyberbullying victim prevalence rate measured in the past 12 months was highest in Romania (37.3%) and lowest in Spain (13.3%)

(Tsitsika et al., 2015). The high prevalence rate across countries also suggests that cyberbullying may be a serious global problem.

The public has become more aware of aggressive behaviours on the Internet as the number of incidents has shot up. Numerous studies across the board have attempted to pose questions about cyberbullying, including about the perpetrators, victims, methods and motives behind it (Keith & Martin, 2005; Li, 2006; Limber, 2012; Menesini & Nocentini, 2009; Slonje & Smith, 2008; P. Smith, Mahdavi, Carvalho, & Tippett, 2006). In the next section, I explore some of these studies under different areas.

Definitions of Cyberbullying

First, we start from defining the cyberbullying phenomenon. Although cyberbullying has just occurred in recent decades, bullying has been a hot topic in the education sector for a long period. There are similarities between traditional bullying and cyberbullying. Dan Olweus defines bullying as a repeatedly occurring behaviour that is "intended to inflict injury or discomfort upon another individual" and at the same time involves an imbalance of power in the relationship of the victim and the perpetrator (Olweus, 1994; 2013, p. 756). Smith (2008) defines cyberbullying as "an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376).

In recent years, academics in various professions, including legal, psychology, sociology, counselling and education, have suggested a variety of definitions for cyberbullying. Several recent and significant studies on cyberbullying were selected based on the criteria of their high citation rate, and important researchers in this subject.

Table 1 shows the various definitions of cyberbullying proposed in the literature.

Table 1 *Definitions of cyberbullying*

Definition of cyberbullying

No	Literature	Definition	1	2	3	4
1	Finkelhor et al. (2000, p. x)	"Harassment: Threats or other offensive behaviour (not sexual solicitation), sent online to the youth or posted online about the youth for others to see."	✓		✓	✓
2	Ybarra and Mitchell (2004, p. 1308)	"Internet harassment is an overt, intentional act of aggression towards another person online."	✓		✓	✓
3	Patchin and Hinduja (2006, p. 152)	"cyberbullying as wilful and repeated harm inflicted through the medium of electronic text."	✓	✓	✓	✓
4	Li (2007a)	"cyberbullying involves the use of information and communication technologies such as e-mail, cell phone and pager text messages, instant messaging, defamatory personal Web sites, and defamatory online personal polling Web sites, to support deliberate, repeated, and hostile behaviour by an individual or group, that is intended to harm others."	✓	✓	✓	✓
5	Willard (2007, p. 265)	"Cyberbullying is being cruel to others by sending or posting harmful material or engaging in other forms of social aggression using the Internet or other digital technologies."	✓		✓	✓
6	Slonje and Smith (2008, p. 147)	"Cyberbullying in which the aggression occurs through modern technological devices, and specifically mobile phones or the Internet."	✓		✓	✓
7	Juvonen and Gross (2008, p. 497)	"Cyberbullying is broadly defined as the use of the Internet or other digital communication devices to insult or threaten someone."	✓	✓	✓	✓
8	Smith et al. (2008, p. 376)	"Cyberbullying is reported as an aggressive, intentional act carried out by a group or individual, using electronic forms of contact, repeatedly and over time against a victim who cannot easily defend him or herself"	✓	✓	✓	✓
9	Harasymiw (2012, p. 7)	"Cyberbullying is usually not a single incident; it is often an on-going activity over a period of	✓	✓	✓	

		time. It is intentional, with the purpose of embarrassing or harming someone."				
10	Olweus (2012, p. 521)	"Cyber- or electronic bullying is broadly defined as bullying performed via electronic means such as mobile/cell phones or the Internet."	✓	✓	✓	✓
10			10	6	10	9

Note. 1: Intentional aggressive behaviour 2: Repeat occurrences 3: Imbalance of power 4: Use of information and communication technology

Based on these studies, cyberbullying appears to be composed of four major elements and applied in this study(Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Olweus, 2012, 2013; Smith et al., 2008; Tokunaga, 2010):

1. Intentional aggressive behaviour
2. Repeat occurrences
3. Imbalance of power
4. Use of information and communication technology

A consensual and specific definition for cyberbullying, however, has not yet been reached because many of the cyberbullying studies miss at least one of the components stated above. For example, William and Guerra's study on Internet bullying prevalence and predictors measures intentional aggressive behaviour on the Internet but does not pay attention to the repeated nature of the behaviour. Some aggressive behaviours happen only once, which means that they fall outside the usual definition of bullying (K. R. Williams & Guerra, 2007, p. S17).

Meanwhile, some researchers define cyberbullying as a completely new pattern of behaviour in the cyberworld. von Marées and Petermann (2012) review that the traditional definitions of bullying do not cover the wide range of cyberbullying behaviours. This means that a direct adaptation of Olweus' definition of traditional bullying is not sufficient to represent the

nature of this new phenomenon. Unlike regular bullying, it is difficult to identify repeated occurrences or imbalances of power in the cyberworld. Vandebosch and Van Cleemput (2008) argue that even a single act could be sufficient to constitute an act of cyberbullying. Although it is undeniable that the platform of cyberbullying is ever-changing, Olweus and Smith's approaches in defining cyberbullying are still applicable and clear (Kowalski et al., 2014; Olweus, 2013; Smith et al., 2008; Tokunaga, 2010).

Culture and Cyberbullying

Cultural impact is another important area in cyberbullying study. Görzig and Ólafsson (2013) found that although the prevalence rate varies across 25 European countries, the predictors for cyberbullying behaviour are stable across countries. In another comparative study of cyberbullying found that American college students are more culturally independent than Japanese students; and they engage in more hurtful cyber behaviours than Japanese students, with the US having a higher prevalence rate than Japan (Barlett, 2015; Barlett et al., 2014). In contrast, Li (2008) also found different interaction patterns between Canadian and Chinese youth in cyberbullying incidents, but the prevalence rate in both countries was high.

In fact, cultural background can act as a strong cyberbullying predictor (Li, 2008), and variations in cyberbullying behaviours observed in previous studies may be due to the differences between Chinese and Western cultures. For example, harmony, as a highly appreciated ethical value in Chinese culture, may influence cyberbullying victims, making them tolerate cyber assaults rather than speaking up, so that they avoid conflict, which is seen as negative in Chinese society (Zhou et al., 2013). Despite the fact that interpersonal harmony is emphasised in Confucian values, the Chinese cyberbullying prevalence rate among teenagers is the highest in a global study

(Microsoft, 2012; Y. B. Zhang, Lin, Nonaka, & Beom, 2005). Social harmony is highly encouraged in Chinese society. Chinese parents and teachers are assumed to take an active role in nurturing young people to behave properly (Liu, 1985). Surprisingly, the cyberbullying prevalence rate in China is as high as in Canada and other Western countries (Li, 2008; Tsitsika et al., 2015; Zhou et al., 2013). This inconsistency may be due to the fact that Chinese adults are less familiar with the Internet and social media than their digital native children (Hargittai, 2010; Prensky, 2001). Yardi and Bruckman (2011) describe the difficulty for parents who have never used chat to understand the communication of their children in the cyberworld and set up rules for their behaviour on the Internet. However, Bennett, Maton, and Kervin (2008) point out that digital technology is an evolution, rather than a revolution. Young people interacting on social media may do things differently than their parents, but there are no grounds to consider that their parents cannot understand those behaviour.

In other Chinese societies, a study of 545 Taiwan junior high school students reported 20.4% were perpetrators and 35% were victims of cyberbullying (Huang & Chou, 2010). A cyberbullying study on 1,676 school students in Singapore showed that 56.9% of the respondent reported experiencing at least one form of bullying in the past year (Kwan & Skoric, 2013). The variation in cyberbullying prevalence rate among different Chinese societies also points to the need for further study in cultural aspects.

Gender and Cyberbullying

Gender is a topic mentioned in cyberbullying research frequently but without consensus. Several studies reveal that boys are more likely to be involved in bullying and cyberbullying behaviour (Hinduja & Patchin, 2010a; Hong & Espelage, 2012; Nansel, Overpeck, Haynie, Ruan,

& Scheidt, 2003; Slonje & Smith, 2008). In contrast, some academics have found no significant gender difference in cyberbullying (Li, 2006; Pornari & Wood, 2010).

In previous studies on bullying, gender differences are widely accepted, with a consensus that males are more likely to be involved in bullying (Olweus, 1994). In traditional bullying, perpetrators are unusually male-dominated with a slight gender difference among victims of bullying (Olweus, 1994). Boys are usually predominant in bullying that acquires more physical strength, while girls are more involved in bullying that is rather indirect and relational (Smith et al., 2008, p. 383). Another cyberbullying study further supports that male perpetrators are more involved in direct bullying, while female perpetrators are more likely to bully indirectly by, for example, spreading rumours or social exclusion (Li, 2006; Nansel et al., 2001; J. Wang, Iannotti, & Nansel, 2009).

According to Li (2006), a significant gender difference was found after surveying 264 junior high school students in terms of bullying and cyberbullying. In another survey involving 3,767 6th grade to 8th grade secondary students, Kowalski and Limber (2007) concluded that the frequency of girls' participation in cyberbullying outnumbers that of boys. In contrast, K. R. Williams and Guerra (2007) claim that there are no gender differences in terms of Internet or verbal bullying. The evidence reviewed here seems to suggest a pertinent role for gender in cyberbullying. However, no consensus on gender differences in cyberbullying has been reached.

Roles in Cyberbullying

Furthermore, the work of Rey, Elipe, and Ortega-Ruiz (2012) proposes that the roles of victims and perpetrators in cyberbullying overlap, which is uncommon in bullying. König suggests that cyberbullying might be used by a victim suffering from traditional bullying as a means of

revenge on the perpetrator (König, Gollwitzer, & Steffgen, 2010, p. 215; Ybarra & Mitchell, 2004). Sanders and colleagues find that revenge can, in fact, be one of the motives of cyberbullies (Sanders, Smith, & Cillessen, 2009).

Balakrishnan (2015) study on 393 youngsters in Malaysia found that there are tendencies for cyberbullying victims to become perpetrators. An online study on 777 participants recruited from German online forum reported that a victim of cyberbullying may take revenge through bullying other people for their sad experience (König et al., 2010). One more study on 3449 Korea middle school students showed that revenge is one of the reasons for cyberbullying (You & Lim, 2016). The young people involved in cyberbullying can be both a perpetrator and a victim. This is because of the complex nature of the cyberworld, which includes perceived anonymity and power differences (Hinduja & Patchin, 2008; Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). These sources suggest that the role duplication among people participating in cyberbullying should be addressed in the research design.

Technology and Cyberbullying

As technology is an essential element in cyberbullying, a review of digital culture is necessary to enhance our understanding of cyberbullying among young people. All the action and behaviour in the cyberworld can easily be recorded by a machine or user. Steinhart (2014) suggests human behaviour and interaction in the cyberworld, such as photographs, sound and video recordings, can survive even after death. Digital traces of cyberbullying incidents have been automatically recorded and copied in social media as well as search engines and other online programmes (Kosinski, Stillwell, & Graepel, 2013). This recorded information is openly

accessible and may cause repeated harm to the victim. Therefore, a perpetrator's single act of aggressive behaviour can be recorded and forwarded numerous times by different individuals. Comments and page views can be regarded as inflicting new harm to the victim as well; however, the original perpetrator is not necessarily involved in the repetition. Olweus' definition fails to acknowledge the digital nature of cyberbullying. The impacts and harm of cyberbullying can last for several years, so a more in-depth inquiry on the nature of cyberbullying in this study is required.

In addition, it may not be possible to adopt directly the idea of power imbalance from traditional bullying. Instead of physical strength, social skills, verbal ability and social networks, computer knowledge, ability in mastering ICT and cyber networking are much suitable indicators demonstrating individuals' ability and power as well as the imbalance of power in the cyberworld (P. K. Smith, del Barrio, & Tokunaga, 2013). Stone (2014) further states that power imbalance is arguably unclear in cyberbullying; it can mean higher technological skill, online popularity and greater social networks (e.g. number of friends on social media) and anonymity. Although there are still many uncertainties in the description of power, cyberbullying perpetrators are widely believed to be in a higher power position than their victims (Li, 2007a; Olweus, 2012; P. K. Smith, 2012; Tokunaga, 2010).

Due to advancements in technology, the form of cyberbullying is ever-changing. New cyber behaviours and communication patterns will be innovated every day, which makes the meaning of cyberbullying more dynamic and difficult to master. Messages sent via SMS messaging, mobile phones or emails were the earliest forms of cyberbullying recorded (Rivers & Noret, 2010). However, as technology further advances, photographs can be taken by mobile phones and uploaded to the Internet, contributing to a new cyberbullying platform. In other words, with the intention of shaming and attacking the target victim, a perpetrator can take and distribute

embarrassing photos and videos of the victim via the Internet (Parry, 2005). Another study shows that the cyberbullying in photo-sharing social media is more prevalent than on text-based platforms such as Twitter (Zhong et al., 2016). The available of visual elements can enhance the effect of cyberbullying.

Social networks such as Facebook, YouTube and Instagram further extend the borders, and intensify the impacts, of cyberbullying. Current social networking platforms allow the instant upload, and circulation, of aggressive messages and insults. They are no longer seen only by the target receiver in private, but also by anyone with access to the Internet (Lenhart et al., 2011).

Moreover, the social media further enhances the impacts and spreading of aggressive messages by the automatic self-documented and archived functions. These resulted a second harm to the victim (Wesler, Smith, Fisher, & Gleave, 2008). A perpetrator single attack may resulting multiple harms to the victim by the digital trace (Howison, Wiggins, & Crowston, 2011; Vandebosch & Van Cleemput, 2008). A latest European Parliament study finding also suggests that cyberbullying is mostly done through mobile phones and social media (Virginia Dalla Pozza, Anna Di Pietro, Sophie Morel, & Psaila, 2016).

Therefore, it is necessary for this study to explore the latest scenario of cyberbullying incidents from the direct experience of perpetrators and victims. In-depth interviews with young people involved in cyberbullying can provide a real, in-depth and recent picture of young people's lived experiences of these new phenomena. A detailed description of the cyberbullying cases is presented in Chapter Four.

Digital Cultures of Young People

The impacts of information and communication technology on the daily life of young people are increasing: 74.6% of the population in Hong Kong are Internet users (WorldBank, 2015). Social media fosters online friendship, which has been suggested as a new type of social relationship (Jacovi et al., 2011). A study into the social interaction of Chinese fifth and sixth graders discovered that they engage in a range of online activities including sharing on social media and playing computer games such as massively multiplayer online games (MMOGs). Online friendship has been built in cyberworld by the above activities (Leung & McBride-Chang, 2013). Another study by Seiler and Navarro (2014) shows that social life among young people becomes digitally-physically hybridised: online social and real-world social lives are not separated. Similarly, bullying occurs interconnectedly both off- and online. The digital part of life among young people is increasing.

A study of young people's online communication patterns has shown a directly proportional relationship between online self-disclosure and the likelihood for cyberbullying to occur (Valkenburg and Peter (2009, p. 4). This means flaming or online harassment are much more easily induced if online self-disclosure involves more intimacy. Furthermore, Kaplan's more in-depth study of gender differences in online communication patterns finds that online communications are equally important to both genders. However, boys tend to participate in online activities involving less self-disclosure, such as virtual game worlds (e.g. "World of Warcraft", "League of Legends", which are massive multiplayer online role-playing games) where they create an avatar of themselves to represent their social presence in cyberworld. In contrast, girls' self-disclosure levels are much higher and they are more involved in virtual social networks such as Facebook

and Second Life (Kaplan & Haenlein, 2010, p. 62). Nansel finds that girls tend to manipulate relationships by carrying out certain behaviours such as spreading rumours to achieve the goal of bullying (Nansel et al., 2001, p. 2). The gender difference in online behaviour pattern may corelated with the cyberbullying, it can be further explored in this study.

Online Privacy and Gender

Awareness of privacy protection is important issue in digital social life. Although young people in the 21st century are digital savvy and possess better digital competencies than adults (Jones-Kavalier & Flannigan, 2008), they are exposed to a number of risk in the cyberworld, especially younger teenagers under 13 years old (O'Keeffe & Clarke-Pearson, 2011). Another study on young people's self-disclosure in social media found that young people are usually not aware of the potential danger of personal data disclosure and are more willing to accept 'friendship' requests from strangers (Taraszow, Aristodemou, Shitta, Laouris, & Arsoy, 2010). In contrast, Livingstone (2008) suggests that young people work with a subtle classification of 'friends' based on intimacy levels in social media which guides their approach to online privacy. In other words, young people can control their disclosure of personal information in social media by their own decision. However, Livingstone also admits that some young people may suffer from the self-display of personal information to a wider group especially younger teenagers (Livingstone, 2008). This result may reflect the idea that young people's awareness of privacy is another potential concern in cyberbullying. Although the digital native generation masters skills in social media and the cyberworld much better than adults (Bennett et al., 2008). A digitally skilful person may also suffer from information leakage because of their friends' careless or improper privacy settings on social media (O'Keeffe & Clarke-Pearson, 2011).

From the gender angle, a study reports that girls have a higher tendency to be victimised in cyberbullying than boys because of their tendency to post photos and details of their personal lives online (Rivers & Noret, 2010, p. 2). Another study reports an interview with a 13-year-old girl, who commented, "I would say that girls do it more. Well, there occurs more cyberbullying because I believe one doesn't want to be as open with what one does. One can be pretty like secretive" (Slonje, Smith, & Frisén, 2013, p. 3). The study reveals that the nature of girls sharing secrets with their peer groups via electronic forms of communication makes girls in general more vulnerable than boys in the cyberworld. Moreover, a comparative study in Belgium, Ireland, Portugal and the UK found that more than half of teenagers do not manage their online privacy settings properly (Mascheroni & Ólafsson, 2014). Online privacy and information leakage are another risk contributing to cyberbullying.

On the other hand, social interaction in the cyberworld leaves digital traces of young people's actions and identity as well as simply being social relationships in a digital format. The feedback and comments on social media and websites can reveal the personal information of a user (Jacovi et al., 2011). Online social interaction is self-documented and archived in digital records (Wesler et al., 2008). Steinhart (2014) describes the personal record, such as diaries, photos, sound and video in the cyberworld, as a 'Digital Ghost', an animated biography that records the life experience and actions of an individual. For example, Facebook's timeline performs the above functions to record all of an individual's online social interaction digitally in a time sequence of posts. Depending on the privacy settings selected by the individual, different groups of people, from close friends to anyone with Internet access, can search through their personal life records. Moreover, Kosinski et al. (2013) show that a social media user's sensitive personal attributes such as sexual orientation and use of addictive drugs can be accurately predicted by their online

behaviour. The popularity of social media and more sharing of personal information among young people in the cyberworld, the more substantially the risk of information leakage increases. As young people's interaction with their peer Microsystem relies more on social media, it is a powerful platform to enact cyberbullying. This implies that social media should be a critical area in this study.

Perceived Anonymity

Another major feature of cyberbullying is perceived anonymity. Compared to traditional bullying, perpetrators in cyberbullying often see themselves as anonymous users, which significantly encourages more potential perpetrators to carry out aggressive acts online (Bauman, 2010; Hinduja & Patchin, 2008).

In conventional bullying, perpetrators can assess the harmful level of their acts on the victims directly and the immediate feedback received becomes a reference to determine the level of the following attacks. However, in cyberbullying, the interactions between people involved are not face-to-face, so the harm and impacts caused by the cyberbullying to the victim are unobservable and unpredictable, which may lead to perpetrators' unawareness or underestimation of the consequences of their acts. Since there is no information indicating the effect of the bullying act on the victim, cyberbullies' empathy and remorse are significantly reduced (Slonje et al., 2013; Sourander et al., 2010, p. 721). This can be seen in another study on Australian students, which reveals that most perpetrators do not think their actions are harsh or have an impact on the victims (Campbell et al., 2013). An implication of this is the possibility that a number of perpetrators may not be aware of the impact of their actions. Building from this evidence, in collecting data, this study should think through the intentions and impacts of perpetrators. The next section provides a

general review of cyberbullying measurement and forms of cyberbullying behaviours identified in previous studies.

Theories of Cyberbullying

Several frameworks have been employed in previous studies of cyberbullying (Kowalski et al., 2014). Major theories identified through the literature include the social-cognitive model (Bauman, 2010), social information processing (Salancik & Pfeffer, 1978) and ecological systems theory (Bronfenbrenner, 1997). One of the most commonly used models to explain aggressive cyber behaviour among people is the General Aggression Model (GAM). This is a social-cognitive model that allows the researcher to formulate testable hypotheses to study the cyberbullying as well as personal, cultural and societal factors (Anderson & Bushman, 2002). The model provides a social-cognitive framework for understanding aggression and violence. It posits that cyberbullying is learned as an appropriate aggressive action by the perpetrator. However, GAM is criticised for its poor validity and lack of attempt to study the interaction between perpetrator, victim and environment (Ferguson & Dyck, 2012). As young people's participation in cyberbullying is very complicated, they will take different roles in various scenarios, and the perpetrator in one scenario may be the victim in another scenario (boyd, 2014; boyd & Marwick, 2011). Therefore, a more comprehensive framework is required to examine the interaction among young people and the wider social environment.

Another theory often applied in studies of cyberbullying is social information processing theory (SIP) (Calvete & Orue, 2011; Runions, Shapka, Dooley, & Modecki, 2013). This is an interpersonal communication theory explaining how people get to know one another without the use of nonverbal cues, and how they develop and manage relationships (Walther, 1992, 1996). It

suggests people can learn about individual behaviour by observing the social environment and the related information through which behaviour occurs and adapts (Salancik & Pfeffer, 1978). Walther (1996) further uses the theory to describe the online communication pattern in a computer-mediated environment. The nonverbal and contextual cues in communication are missing in online messages and asynchronous communication, which is clearly described in the theory. It is useful to analyse the communication patterns among young people involved in online aggressive messaging like cyberbullying.

SIP assumes face-to-face communication has greater positive social behaviour than computer-mediated communication, however empirical studies have found results contrary to the theory (Joinson, 2003). Moreover, SIP theory fails to explain the influence of cultural values on communication. Tokunaga (2009) claims that the young people's degree of online self-disclosure is higher in cultures emphasising an individualistic (Western) than a collectivism culture (Eastern). The results show cultural differences in the degree of self-disclosure, which is an important means to build up social relationships in the cyberworld. Dooley, Pyżalski, and Cross (2009) examine information processing in bullying and suggest a subtle difference between bullying and cyberbullying, such as proactive aggression. Another major limitation with this theory is that it does not explain why and how macro and societal factors influence young people. The theory is much more concerned with individual communication with others. Runions et al. (2013) suggest that SIP is more suitable for examining the difference between those engaging in face-to-face bullying and cyberbullying. The influence of environmental factors on cyberbullying are not well addressed in SIP, therefore, making it an unsuitable theoretical framework for the present study.

The third applied theory is ecological systems theory (Bronfenbrenner, 2009), which focuses on personal and environment factors as well as the interaction among them. It provides a

more comprehensive description of cyberbullying from a different lens and positions individual behaviour within five levels of environmental systems (i.e., Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem). Although, this is not a domain-specific theory on cyberbullying, it can provide a holistic view and focuses on an individual's interaction with environmental contexts. The major advantage of using ecological systems theory is that the theory addresses the individual factors, environmental as well as other contextual factors, in a systematic framework. When compared with GAM and SIP, Ecological systems theory suggests that human development is not empty of context, and the context factor plays an important role in the growth of young people. Another strength of the theory is assisting in identifying the potential contributors to young people's cyberbullying behaviour.

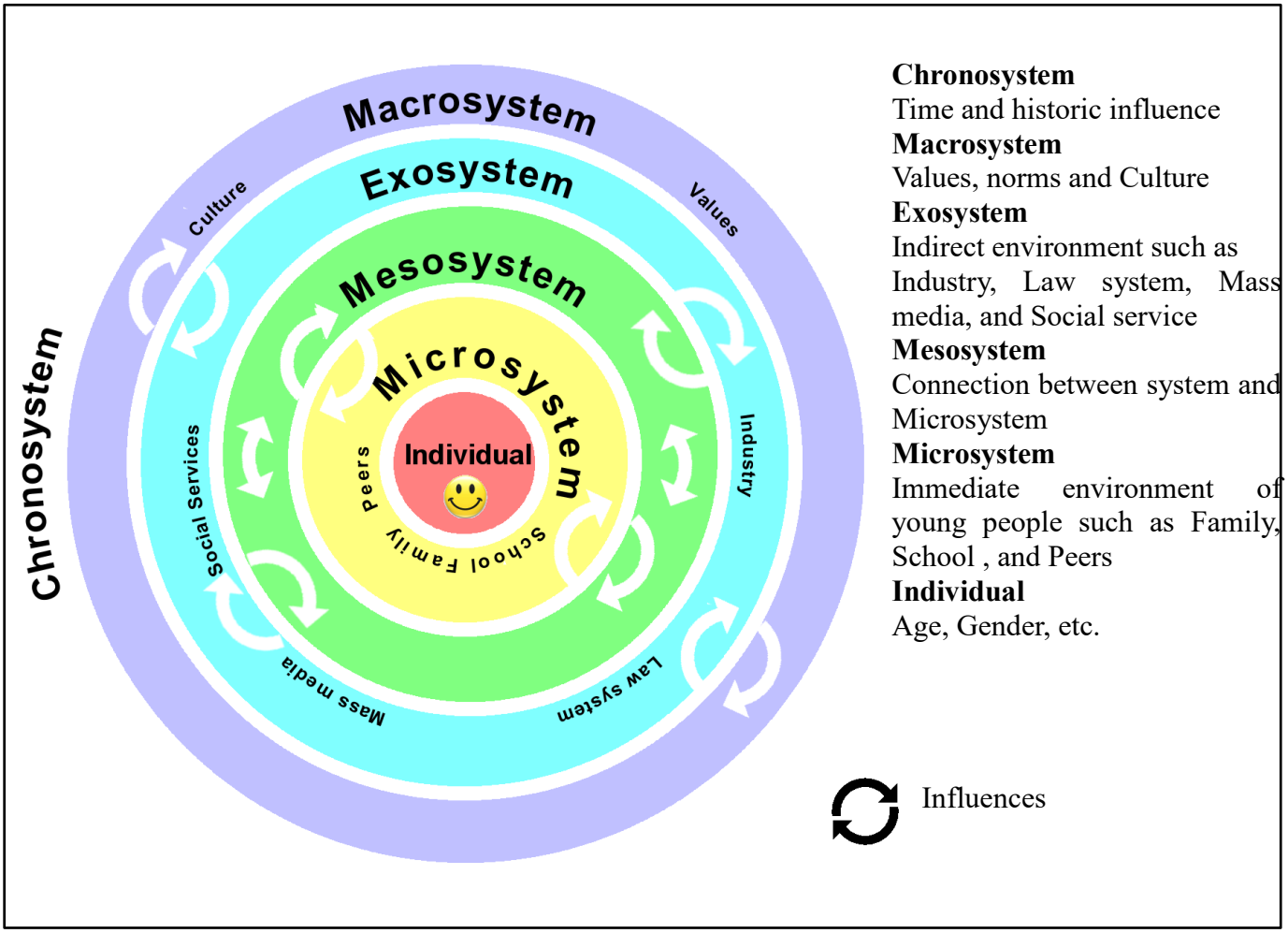
Whilst the theory does not provide reasons for human behaviour such as cyberbullying as specifically as the GAM and SIP models, it does provide an opportunity to find out the potential predictors of cyberbullying and to identify which parts of the ecological system might be targeted for intervention. Moreover, it helps in understanding and identifying the multi-system factors influencing young peoples' development. Based upon this understanding, we can design and implement appropriate service projects to foster young people's development in response to the challenge from cyberbullying (Lewthwaite, 2011). In light of the above discussion, this study adopted ecological systems theory as a research framework. There follows a detailed outline of the theory and how it positions and contributes in this study.

Ecological Systems Theory

Using ecological systems theory as a theoretical framework,

Figure 1 presents the complex and multidimensional factors affecting the cyberbullying behaviour of adolescents in this study.

Figure 1 *Ecological environment of young people*



Source: Adapted from Bronfenbrenner's ecological systems theory (Bronfenbrenner, 2009)

Bronfenbrenner's theory is mainly focused on human development. It emphasises the various factors that account for individual differences in development, as well as changes over time, with the interaction between maturation and personal experience. He further explains the

Process–Person–Context–Time Model (PPCT), which covers the main elements in his theory (Bronfenbrenner & Morris, 2006).

The Process

Process refers to proximal processes. Bronfenbrenner suggests human development is a process of "progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment" (Bronfenbrenner, 2005, p. 6). He further notes that "proximal processes" can be comprehended as the primary engines of development (Bronfenbrenner, 2005). This is a term created by Bronfenbrenner to describe the interaction between individual attributes, the environment and time. Conflict is unavoidable and an inevitable part of personal experience during the developmental process. Cyberbullying is aggressive online interaction (Finkelhor et al., 2000; Olweus, 2012); it is not a single behaviour or independent of other factors in the youth developmental process. It is necessary to be aware of the influence of the ecological system on young people.

Numerous studies have revealed that victims of cyberbullying have also suffered from traditional bullying (Kowalski & Limber, 2007; Limber, 2012; Smith et al., 2008; J. Wang, Iannotti, Luk, & Nansel, 2010). Statistics also show that victims experiencing traditional bullying are 2.5 times more prone to suffer from cyberbullying (Hinduja & Patchin, 2008, p. 114). This is demonstrating a positive correlation between bullying and cyberbullying. In this study, both bullying and cyberbullying are considered to be a hostile interaction between the subject and their peers. It can be recognised as a learned behaviour in the developmental process of the young people involved.

The Person

Here, person refers to the biopsychological features of an individual. Bronfenbrenner suggests three types of personal characteristics are imperative in the human development process. The first one is demand, such as gender, age, skin colour and physical appearance. Resources, including personal ability, skill and knowledge, social and material resources, comprise the second type. The third is force: this refers to personal motivation, persistence and temperament. All of the above factors influence the developmental process (Bronfenbrenner & Morris, 2006; Tudge, Mokrova, Hatfield, & Karnik, 2009). Therefore, the theory indicates that the subject's personal attributes, skills and resources are significant factors affecting the development of young people. Therefore, this study should address personal factors such as gender, ability, skills, and psychological status in the data collection.

Ecological system theory suggests that personal factors may interact with the environment and affect the development process (Bronfenbrenner, 2009). For example, gender may influence the interaction between the person and their peers in the Microsystem, especially with the popularity of smartphones and social media in the technology subsystem. The ease and convenience brought by the cyber social network facilitates girls' bullying acts. However, some studies suggest that boys are more actively involved in cyberbullying (Salmivalli & Pöyhönen, 2012, p. 67) than traditional bullying. In contrast, Slonje and Smith (2008) suggest a female-skewed gender balance in cyberbullying because cyberbullying, where the acts of bullying are virtual, does not require physical strength, meaning the difference between the genders is insignificant (P. Smith et al., 2006).

In Bronfenbrenner's (2009) framework, the resources of the young person may be affected by individual factors such as age and gender. In general, girls are stereotyped as strong at social skills while boys may be good at computer skills. In Whitley (1997) study, the difference varies among population group; the largest difference was found in high school students before the popularity of the Internet. Another study found men and women do not different greatly in their online abilities (Hargittai & Shafer, 2006). Together, these studies indicate that gender may be a personal attribute affecting participation in cyberbullying. No consensus has been reached from current research about gender differences in cyberbullying. It can be further explored in this study.

The 'force' of a person in ecological system theory refers to the motivation of young people in the developmental process (Bronfenbrenner, 2009). In this study, it can be interpreted as the motive of young people involved in cyberbullying. A young person can be a perpetrator if they intentionally use aggressive behaviours to hurt the victim (Kowalski et al., 2014; Olweus, 2013; Smith et al., 2008). However, the intention of cyberbullying is not always inflicting unpleasant feelings on the victims; some perpetrators bully others just for fun or entertainment. According to Smith et al. (2008), "just having fun" is the most common reason for cyberbullying. The finding implies that this study should adopt a more flexible definition on cyberbullying especially around the motives of the perpetrator.

Another 'force' to urge young people to perform cyberbullying is the reward. The rewards gained by perpetrators also vary between cyberbullying and bullying. The victim experiences an instant harmful effect from insults and bullying. Unlike traditional bullying, a victim of cyberbullying is not hurt until or unless the victim is made aware of the insults, either by viewing messages or videos on the Internet themselves or by being told by a third party (Dooley et al., 2009; Vannucci, Nocentini, Mazzoni, & Menesini, 2012). The differences in the timings of the

effects of the bullying point to variations in the underlying motives of the perpetrator in the two types of bullying. The rewards for cyberbullying may result mostly from the act of performing the harmful action instead of witnessing the results of bullying. Hence, the force to motivate young people to cyberbully others is complicated. More information from this study would help us to establish a better understanding of young people's involvement in cyberbullying.

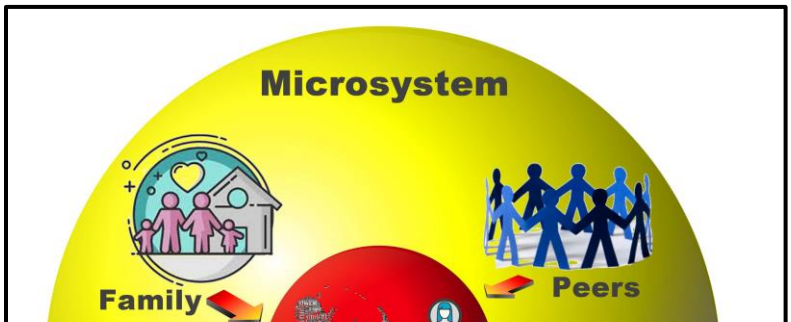
The Context

Young people grow up and interact with their own ecological environment to formulate their own traits. This is the context of human development. As indicated in Figure 1, the personal interaction experience with the Microsystem imposes a significant impact on their psychological growth and behaviour. The interconnections among the Microsystem and young people constitute the Mesosystem. The Exosystem is the social settings that influence young people but with which they are not directly involved, such as media, government, legal systems, parents' workplaces and social services. Cultural contexts, including heritage and values, constitute the Macrosystem of the ecology. Papatraianou, Levine, and West (2014) suggest five key contexts that influence the occurrence of and coping with cyberbullying: individual personal, home, school, public, and cyber; these factors are central to understanding the ecological influences in the lives of young people.

In short, the theory suggests that the variation in interconnections among the Microsystem and societal factors may influence young people's development and behaviour. In this study, the context includes all the systems that affect young people and their cyberbullying behaviour. Family members, peers, neighbours and school are the Microsystem that has a direct interaction with young people (see

Figure 2).

Figure 2 *Microsystem and young people*



School and Peers System

From an ecological perspective, a cyberbullying perpetrator mainly comes from the victim's peer and school Microsystem (van Geel, Vedder, & Tanilon, 2014). Participants in bullying usually originate in the victim's peer group and live in the same community, for example being a classmate or neighbour; the bystanders in such cases are limited in numbers (Olweus, 1994).

The first study of cyberbullying, and a number of studies since, point out the impact of peers on victimisation and cyberbullying behaviour (Finkelhor et al., 2000; Pornari & Wood, 2010; van Geel et al., 2014). The school system plays an important role in helping the victims in cyberbullying (Hinduja & Patchin, 2013; H. J. Johnson, 2012; Li, 2007b). Hong and Espelage (2012) suggest that negative peer relationships and disconnection from school are risk factors for cyberbullying. Some web-based survey on students found that cyberbullying is interconnected with school bullying (Beran & Li, 2008; Juvonen & Gross, 2008). This informed this study that

the school system is another important element in studying the cyberbullying and help-seeking behaviour of young people.

Family System

The family system is one of the most influential contexts in a young person's ecology of development (Bronfenbrenner, 1986; Maccoby & Martin, 1983). Positive family relationship is a significant factor in youth development. Although family factors may not directly correlate with young people's cyberbullying behaviour, family support is strong protective factor against self-harm among cyberbullying and bullying victims (Hinduja & Patchin, 2010a). However, previous studies' findings show that only a small number of cyberbullying victims seek help from parents as their coping strategy: most of them do nothing or seek help from peers (Hoff & Mitchell, 2009; Slonje et al., 2013; Tokunaga, 2010). Family support and interaction with young people in cyberbullying were explored by quantitative and qualitative methods in this study.

The interactions between family, schools and the young people in my study are generally weak (Chui, 2001; Hong Kong Council of Social Service, 1988). The critical case scenario may provide more rich information in studying the influence of the ecological environment in cyberbullying.

Exosystem & Macrosystem (Culture and Country Variation)

The Exosystem, such as government, mass media, industry, laws, the education system and the economic system influence young people indirectly through the Microsystem (Bronfenbrenner, 2009). For example, the country's economic fluctuation will affect the family income and the employment opportunities of young people.

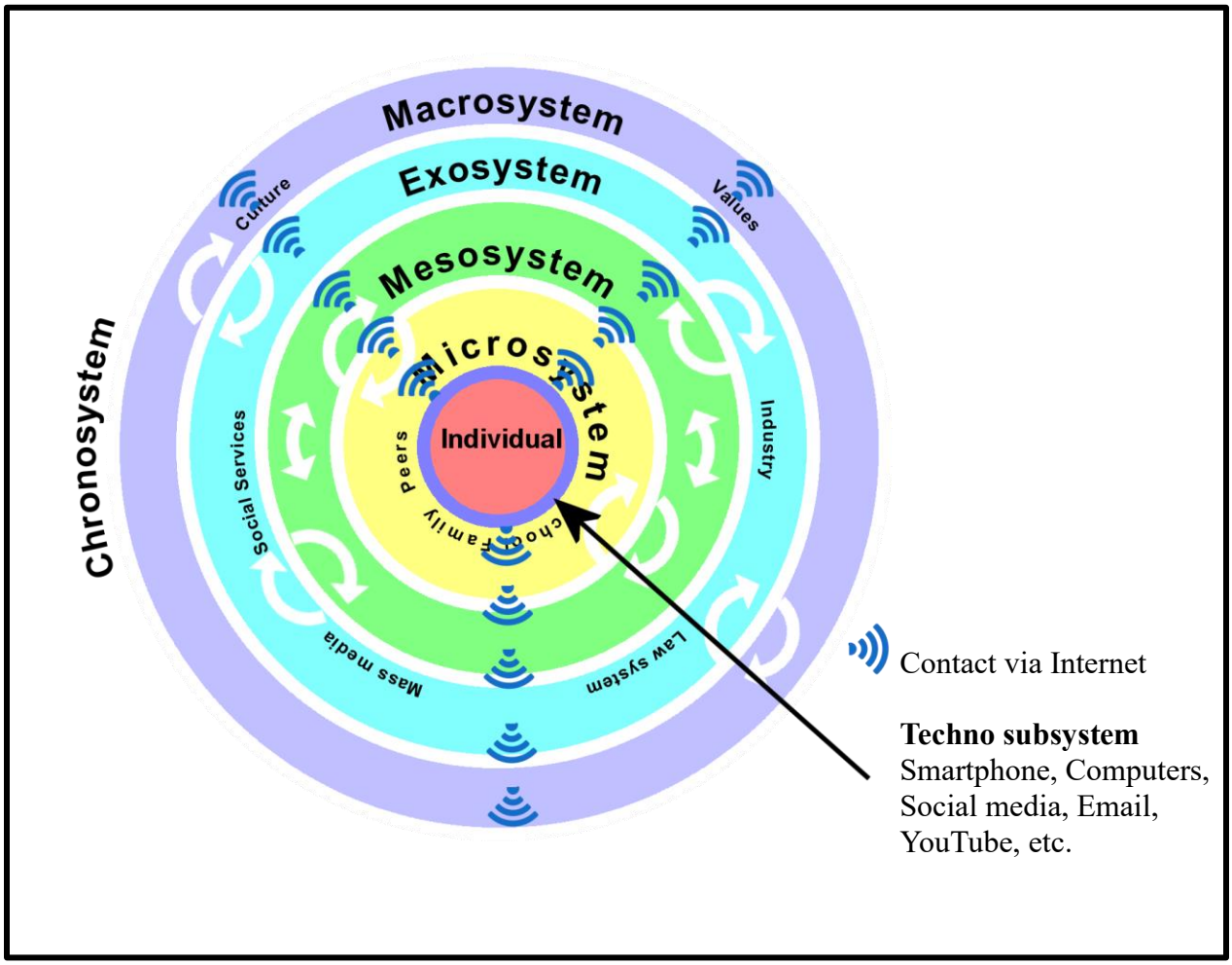
It is possible that cyberbullying may vary with the country, but research into cross-cultural differences in cyberbullying is limited (Kowalski et al., 2014). Despite the cultural variation found, the number of studies on cyberbullying in China is very limited. The present study tried to clarify the prevalence rate and related risk factors of cyberbullying among Chinese young people. This provides more background information for further cyberbullying studies examining cultural differences. Moreover, the cyberbullying behaviour pattern reported in Western studies may not be appropriate to apply directly in Chinese society. An explorative study on cyberbullying behaviour is needed to identify the phenomenon in a local context. Considering all of the above studies and ecological system theory, it seems that the cultural factors in the Macrosystem may influence young people's cyberbullying behaviour (Bronfenbrenner, 2009).

Technology and Ecological Systems

Young people's ability can be enhanced by using information technology; one's communication with others can work beyond face-to-face interaction. It can extend young people's capabilities and interaction with the existing Microsystem, Exosystem and Macrosystem. With the growing popularity of online interaction through the Internet, Johnson (2010) proposes a refinement to Bronfenbrenner's ecological theory in the Techno subsystem, which imposes significant impacts on the development environment of young people. The ecological Techno subsystem includes young people interaction with people and hardware for communication, information seeking, gaming and recreation via the Internet. Technology enables young people to extend their connection outside the immediate Microsystems in their original ecological environment. The Internet is a techno subsystem in the ecological model, with obvious links to Microsystems such as family, school and peers (Johnson, 2010). The adapted ecological

environment is presented in Figure 3. With the popularity of smartphones, the media involved in the techno subsystems have been transformed from desktop computers into a personal device in the pocket of a young person. This enables young people to communicate with anyone in the cyberworld, interact with friends on social media and play games and watch videos any time and anywhere (Google, 2013).

Figure 3 *Adapted ecological environment of young people in the Internet era*



Source: Adapted from Bronfenbrenner's ecological systems theory (Bronfenbrenner, 2009) and the theory of the techno subsystem (Johnson, 2010)

Traditional bullying usually takes place in the school setting during schooldays or after school (Nansel et al., 2001; Olweus, 1994). Therefore, the victim can escape from the perpetrator

during the school holidays or by leaving the school community. However, victims of cyberbullying cannot escape as easily because the perpetrator can carry out aggressive acts anywhere and at any time with the support of the technology subsystem (Johnson, 2010; Kowalski, Limber, Limber, & Agatston, 2012). Since the bullying behaviour cannot be stopped by physical, geographical or time constraints, the victim cannot defend themselves or get rid of the cyberbullying. Even suspending the victim's Internet account or banning the perpetrator's incoming messages cannot prevent the aggressive acts. Dooley et al. (2009) claim the feeling of powerlessness in cyber victims may be due to the sense of inescapable bullying, which further amplifies the power imbalance between the victims and perpetrators. Once online, harmful messages can be spread further through social networks or public networks, thus contributing to the victim's inability to effectively escape from the attack (Kowalski et al., 2012).

Furthermore, the actual harmful acts in cyberbullying can be spread to an unlimited number of bystanders through the Internet; the people involved may not know each other, or the victim and perpetrator. Meanwhile, easy duplication and forwarding of insults, which are some of the highlighted features of cyberbullying, can contribute to a more severe and lasting impact on the victim (Kowalski & Limber, 2007).

Besides this, the perpetrators in cyberbullying can enhance the bullying effect further: ICT can be used to spread the insulting messages more widely, across an entire school community or through online public systems to increase the size of the audience and act as an extension of conventional bullying. In cyberbullying, Kärnä identifies that bystanders' behaviour is particularly influential in significantly increasing the interpersonal risk factors for victimisation (Antti, Voeten, Poskiparta, & Salmivalli, 2010, p. 261). This implies that cyberbullying has a greater chance to penetrate with its impacts into other ecological systems of the victim via the Techno subsystem.

This indicates that the Techno subsystem may be a more significant factor than the immediate ecological environment in cyberbullying incidents. Therefore, the accessibility of the victim in the Microsystem is particularly relevant to the study of cyberbullying.

Chronosystem (Time)

Finally, the Chrono system is the dimension of time affecting the life course of young people, such as historical or individual developmental stages or life events (Bronfenbrenner, 1997; Lee, 2010). Erikson (1993) suggests that a healthy human should develop from infancy to late adulthood. Each stage is endangered by a psychosocial crisis. Personal development and life events affect young people. The time factor affects the developmental stages and lifespan of a person. Most studies identify upper primary and secondary school-aged children as the groups at high risk for cyberbullying. Traditional bullying reduces with age; P. K. Smith, Madsen, and Moody (1999) identify a fairly steady downward trend between the ages of eight to sixteen.

In addition, the time factor has a major impact on technology advancement. The earliest form of cyberbullying was mainly in text form because of the constraints of technology at that time. Multimedia, video and photos have become more common in more recent cyberbullying behaviour. All things being equal, including mind-set and resources, and the only variable being time, the cyberbullying behaviours of an adolescent in 2015 would be very different from that of an adolescent in 2005.

Ecological Framework and Cyberbullying

The scenarios of cyberbullying are complicated and undesirable individual behaviour is a reflection of a larger tear in our society (boyd, 2014). I have argued that Ecological systems theory provides useful tools for discussing cyberbullying and a person's interaction with the social environment. It provides a comprehensive and integrative framework to analyse personal factors alongside societal and cultural aspects, creating a picture of their influence on cyberbullying as well as the development of young people.

As a researcher, the goal of this study is understanding the prevalence, perceptions and outcomes of cyberbullying. As a social worker, it is expected that the findings from the ecological perspective can inform the helping profession to provide a suitable support and treatment strategy for young people in cyberbullying. The Ecological perspective has been an integral part of social work practice orientation since 1970 (Ungar, 2002). In my own experience, a social worker does not just work with clients but also the ecological system such as family, school, police and neighbourhood to provide a favourable social environment for the healthy growth of young people. A maladjustment between a client system and the environment usually triggers many difficult conditions for the client (Pardeck, 1988). Moreover, the theory provides a clear intervention and treatment direction. Therefore, it has been extensively applied within the field of social work. Finally, Bronfenbrenner's (2009) ecological systems theory was selected to be the guiding theory for this study. Having described the impacts of technology on the ecological environment of young people, I will now move on to going to explore the digital life and culture and literature related to studies of cyberbullying.

Forms and Measurement of Cyberbullying

Prevalence is the measure and evaluation of issue seriousness among the target group; it is one of the main focuses of almost every cyberbullying study. The prevalence rates vary among different studies because there is a wide classification of cyberbullying, such as variations in measurement, location of the sample and the reporting time frame of this behaviour (Kowalski et al., 2014). Among 1,365 papers published, as of October 2012, Kowalski identifies 131 empirical cyberbullying studies of self-reported measures, concluding a prevalence rate ranging from 10% to 40% in the studies. There is still no consensus on cyberbullying measurement. Berne et al. (2013) review 44 cyberbullying instruments: more than half of the reviewed instruments do not use the concept of cyberbullying but claim to measure it. None of the instruments has been developed for the Chinese context.

The existing measurements of cyberbullying fall into two camps: single-item measures and multi-item checklists (Hinduja & Patchin, 2008). In the single-item measure, the researcher provides a definition of cyberbullying and asks respondents to reply as to whether they are the perpetrators or victims of cyberbullying. K. R. Williams and Guerra (2007) adopt single-item measures in their studies, defining cyberbullying and investigating respondents' experience of it. Where some other studies asked the respondents to report their online behaviour using a multi-item checklist, the checklist includes the most common cyberbullying behaviour. Smith et al. (2008) adopted multiple-item checklists in their study, delineating different forms of cyberbullying and asking respondents to indicate how frequently such behaviours occurred.

Both methods of measuring the phenomena have their pros and cons. The single-item measure is simple and easy for respondents to understand. However, the sensitivity is lower than that of the multiple-item checklist, especially for respondents involved in cyberbullying

(Vaillancourt et al., 2010). A possible explanation for this might be that the respondents tend not to direct confess being a cyberbullying perpetrator, while reporting on a behaviour checklist they may be more likely to tell the truth. However, a note of caution is due here, since the respondents may avoid being stigmatised in answering the question, so the measure might be lower than the actual situation. In this study, multi-item checklists were employed to measure cyberbullying prevalence. The details of the cyberbullying measurements are presented in Chapter Five.

Willard (2007) provides a classification of the eight types of cyberbullying that have been identified: flaming, harassment, denigration, impersonation, outing, trickery, exclusion and cyberstalking.

> **Flaming** is online fighting using messages with angry and vulgar language. **Harassment** means sending nasty, mean, and insulting messages repeatedly online. **Denigration** is a behaviour of sending or posting gossip or rumours about a person to damage their reputation or friendships.
>
> **Impersonation** means the perpetrator pretends to be someone else and sends or posts material to get that person into trouble or danger or to damage that person's reputation or friendships.
>
> **Outing** is sharing someone's secrets and **trickery** is talking someone into revealing secrets, then sharing them online.
>
> **Exclusion** means intentionally and cruelly excluding someone from an online group. **Cyberstalking** means repeated, intense harassment and denigration that include threats or create significant fear (Willard, 2007, p. 265).

The eight types of cyberworld aggressive behaviours have also been identified in cyberbullying studies on Hong Kong Chinese teenagers (Wan, 2011; Wong, Cheng, Li, & Wan, 2009). Hinduja and Patchin (2010b) further propose sexting as a threat in the cyberworld. They define sexting as "the sending or receiving of sexually explicit or sexually suggestive images or video via a cell phone." Based on the above literature on cyberbullying, Limber (2012) suggests the inclusion of 'happy slapping' and 'sexting' in the cyberbullying checklist. Happy slapping events are physical assaults on unsuspecting victims, which are recorded on a camera-enabled mobile phone then posted in cyberspace (Palasinski, 2013; Saunders, 2005). Including 'happy slapping' and 'sexting', ten types of cyberbullying behaviour were defined to formulate the preliminary list of measurement in this study. However, the latest European Parliament report on Cyberbullying announced 19 forms of cyberbullying behaviour in 28 European countries after the data collection of this study, the extra 9 form of cyberbullying are Online harassment, Griefing, Trolling, Fraping, Catfishing, Dissing, Grooming, Sexcasting, Threats (Virginia Dalla Pozza et al., 2016, p. 165). Some of the new forms of cyberbullying are specifically described the behaviour in on-line games or social media. This shown the ever-changing nature of cyberbullying behaviours.

These studies clearly indicate that prevalence is just an indicator of cyberbullying, while other factors such as gender, family, peer, technology and culture play a significant role in affecting young people's involvement in cyberbullying. Therefore, a combined qualitative and quantitative methodological approach was favourable for exploring cyberbullying in Chinese society.

As mentioned in the study goal, the detrimental effect of cyberbullying is a focus of this study. The following section provides a general discussion of the impacts of cyberbullying and helping hand for young people.

Impacts of Cyberbullying

Cyberbullying frequently brings with it negative impacts on youth. Hinduja and Patchin (2010a) claim that suicide attempts are associated with bullying behaviour and cyberbullying. A victim of cyberbullying is 1.9 times more likely to attempt suicide. J. Wang, Nansel, and Iannotti (2011) interviewed 7,313 U.S. School-Aged Children and found the association between cyber bullying and depression. Bauman et al. (2013) further examined 1,491 U.S. high school students and found that cyberbullying is associated with depression and suicide attempts.

Another large-scale survey of 3,112 Australian students found that the anxiety and stress levels and social difficulties of young people involved in cyberbullying are higher than those of non-affected students (Campbell et al., 2013). In Europe, Gámez-Guadix et al. (2013) carried out a longitudinal study of 1,021 Spanish young people in 2011 and 2012. They found that cyberbullying is a predictive factor of psychological and behavioural health problems, including depressive symptoms and substance abuse.

However, much of the research on the impacts of cyberbullying up to now have been descriptive in nature. Most of the above-mentioned studies are cross-sectional in design; the result can only reveal the potential relationship between cyberbullying and some detrimental effects. Although there is still no substantial information on the causation of cyberbullying; these studies notwithstanding show the evidence of the impact of cyberbullying on young people.

Helping hand in cyberbullying

In order to provide on time helping hand for the cyberbullying victim. Help-seeking behaviours of young people in cyberbullying incident is one of the main concern in this study. Juvonen and Gross (2008) study on 1,454 young people and found that they rarely told adults about

their cyberbullying experiences. Notar and Padgett (2013) suggested that teachers and parents might underestimate the impacts of cyberbullying and the linkage between real and digital lives for young people. Stone (2014) further illustrated that peer support is the most immediate help sought by young people in cyberbullying.

On the other hand, study on cyberbullying and family suggested the family protecting function in cyberbullying incident. Hinduja and Patchin (2010a) study on 1,963 U.S. student middle-schoolers and suggested that family support is a strong protective factor against self-harm in cyberbullying and bullying incidents. Papatraianou et al. (2014) study on qualitative cyberbullying case study found that strong family relationships can help young people to overcome online adversity. Espelage(2014) meta-analysis on cyberbullying study concluded that family support can help to buffer the negative impact of bullying. Rodkin and Gest (2011) also emphasised the important role of teachers and other adults, including parents, social workers and other school personnel in the cyberbullying incident. These people are some important partners in helping the cyberbullying victim.

Rationale for the Current Research

In the last decade, studies of cyberbullying and aggressive behaviours among young people have tended to focus on school settings. A number of studies describe the development of cyberbullying in school (Agatston, Kowalski, & Limber, 2007; Bauman, 2010; Beran & Li, 2008; Hinduja & Patchin, 2013; Li, 2006, 2007b; Parry, 2005). However, cyberbullying attacks can happen anywhere, at any time, inflicted by anybody, even though school happens to be the main battlefield in combating cyberbullying. In other words, the main subjects involved in cyberbullying are not confined to students. This shows the necessity of extending the study of these phenomena

to the community level. The current study can reach further to community, school, and critical cases in the existing service network. It can provide a bigger picture and richer information about cyberbullying in Chinese context. This can also help to generate a better understanding of cyberbullying and assist in approaching critical cases.

Besides the critical case interview, self-administered surveys are the most commonly used form of cyberbullying assessment to collect quantitative data. The combination of assessment tools, such as in-depth interviews and survey data for triangulation, can improve the validity and reliability of the study (Creswell, 2012; Johnson & Onwuegbuzie, 2004). Therefore, it is important to solicit networks and organisations with close connections to the young people involved in cyberbullying. In this case, network sampling or purposive sampling may be applicable (Granovetter, 1976; Semaan, Lauby, & Liebman, 2002).

Besides this, existing cyberbullying studies on Chinese society are limited. Among the 2,925 academic papers mentioned above, as far as the researcher knows, only six papers focus on cyberbullying in the Chinese community (Chan & Wong, 2015; Leung & McBride-Chang, 2013; Ong, 2015; Wong, Chan, & Cheng, 2014; X. H. Zhang, 2009; Zhou et al., 2013). Three out of the six papers report on cyberbullying in Hong Kong, none are related to Macao and Guangzhou. Only one unpublished study reports the phenomenon in Macao and Guangzhou (Wan, 2014). It is hoped that this research will contribute to a deeper understanding of cyberbullying and its impacts on Chinese young people.

Furthermore, because of the high-speed development in technology and social media in the cyberworld, a broader definition of cyberbullying is required. The ecological framework employed in this study serves as a more comprehensive framework to explore the cyberbullying

phenomenon considering the environmental factors and influence on young people's cyberbullying behaviour.

Cyberbullying involves a new paradigm of personal interaction, communication and virtual community in the cyberworld. As mentioned in the research goal and questions, both quantitative and qualitative data are needed to measure the prevalence and explore the nature of cyberbullying in the Chinese context to formulate a service direction for the helping profession. The present service network of researchers provides good support for studying the phenomenon in various Chinese societies. The study of different cyberbullying cases in Hong Kong, Macao and Guangzhou enriched the scope of the study. Moreover, the combination of different sources of data can widen our knowledge of a phenomenon and enhance the study's credibility. Moreover, comparative studies among different Chinese cities can further examine the influence of culture and locality on cyberbullying in local communities.

Moreover, future studies should aim to assess the impacts of cyberbullying and suggest means to minimise the detrimental effect of these cyber assaults, if any, lying within Chinese society. This can aid parents and teachers in effectively helping adolescents in need. In the end, the risks and detrimental impacts of the harmful experience on our youngsters caused by cyberbullying can be minimised.

To conclude, a range of literature that covers multiple methodologies and research methods has been reviewed. Although consensus in measuring cyberbullying in terms of the prevalence and the forms of bullying is still lacking, some important elements and concepts regarding cyberbullying, such as gender differences, the rewards of bullying, culture, perceived anonymity, the duplicated role in cyberbullying, and impacts are discussed. Previous research provides a direction for the current study: to verify factors and impacts in a local context. An in-depth

discussion about the methodology, sampling and research methods is presented in the following chapter.

Ecological system theory provides a comprehensive and broad framework to analyse and discuss the phenomena in this study. It also provides a good direction for understanding the influence of different systems on young people's cyberbullying behaviour. The comprehensive framework helps to determine the scope of the data collection. However, the theory is not focused on aggressive behaviour or technology advancement. It has some limitations in defining and measuring cyberbullying and recognising aggressive behaviour online. The researcher had to develop the measuring instrument himself. Previous studies of cyberbullying provided a good supplement for this aspect. The qualitative part of this study also provided valuable information to identify the nature and forms of local cyberbullying behaviour, which was important knowledge to inform the study in its later phases.

In short, ecological system theory describes the effect of the interaction of family, school, social service organisations and government on young people's development. The findings from this study can be a good reference for relevant stakeholders to build a better ecological environment for our young people to tackle the challenges of cyberbullying. The next chapter, therefore, moves on to discuss the research design and methodology of this study.

Chapter Three: Research Design

Introduction

This chapter provides an explanation of the aims, ontology, epistemological approach and research design of this study. The chapter begins with a discussion of paradigms and the use of both quantitative and qualitative methods. Then, the process and the methods employed at each stage are addressed. The application of ecological system theory in different phases of this study is explained. Finally, ethical issues are discussed to protect the young people involved in this study. Cyberbullying research carried out over the last decade has mainly focused on aggressive online behaviours among young people in school. A number of academics started to explore the cyberbullying phenomenon in school (Li, 2006; Parry, 2005; Smith et al., 2008). Kowalski and Limber (2007) address cyberbullying as electronic bullying in school. Later, research on cyberbullying has further extended to countries and the global level (Balakrishnan, 2015; Li, Cross, & Smith, 2011). The main characters involved in cyberbullying are not only students, so it is necessary to study the phenomena at a community level, rather than focusing only on school settings. Through the study, I expect to grasp the nature of cyberbullying in local contexts and provide suggestions for government and local NGOs to design suitable services for young people in need.

Ontology Position and Pragmatism

Ontology concerns the nature of reality, and epistemology is the relationship between the researcher and what can be known about reality. Positivist and Interpretivist are the major camps in the ontological and epistemological traditions (Guba & Lincoln, 1994). As stated in the research

objective, this research aims to find out the nature of cyberbullying in the local Chinese context and suggest a feasible solution to minimise the impacts on young people.

Like ecological system theory, interpretivist researchers need to understand the personal and subjective experiences, motives and meanings, and that information is time and context bound. The ultimate aim of the interpretivist is to understand and interpret human behaviour rather than to generalise and find out the causation of the behaviour (Hudson & Ozanne, 1988; Neuman, 2003). Moreover, the qualitative methodology is a tool and does not exclude the possibility of using quantitative methods. Lincoln and Guba (1985) supplement that the qualitative study of individuals in their natural surroundings can incorporate quantitative data into the research approach. A qualitative research method was employed to explore and understand young people's cyberbullying behaviour. As a social work practitioner, qualitative case studies can provide professional and theoretical insights to further understand the cyberbullying phenomenon in depth (Creswell, 2012).

However, it is also important to find out the factors correlated with cyberbullying for early identification and intervention. As informed by ecological system theory, young people's demographic and environmental factors may influence their development. The prevalence rate and the correlation between those factors can be measured and tested using quantitative data. Adopting both quantitative and qualitative techniques for this study can incorporate the strengths of both methodologies and minimise the preconceived bias (Dewey, 1986; Johnson & Onwuegbuzie, 2004).

Both quantitative and qualitative research approaches have their own strengths and weaknesses, and their combination can provide a comprehensive inquiry into the research question (Creswell, 2013; Tashakkori & Teddlie, 2010). The research questions of this study can be better

answered by employing a mixed methods design. The qualitative methodologies offer a more nuanced view of social reality through multi-layered observation (Hesse-Biber, 2010). The qualitative data can identify the various factors affecting the young people in cyberbullying; the use of that information can inform quantitative research to assess the prevalence pf cyberbullying, how these factors affect the phenomenon and the impact of cyberbullying on young people (Jick, 1979).

Nevertheless, there are still incompatibilities in the research paradigm which are embedded in the use of a qualitative study and quantitative survey. To solve the metaphysical and methodological differences between the purist positions of quantitative and qualitative researchers, pragmatic paradigm can be a solution in this study. Pragmatists focus on the problem rather than the method, and pragmatic researchers use any approaches in order to understand the problem in question (Creswell & Clark, 2007). Patton (2003) also points out one of the challenges for researchers is to find the essential information needed for the research problem, then select the most suitable method to answer the question. Thus, pragmatism can serve as a bridge between conflicting philosophies and provide a way to fit together the insights from both quantitative and qualitative methods into a workable solution in this study (Johnson & Onwuegbuzie, 2004). Pragmatism emphasises the practical application of research findings in real service provision, creating an actual impact on young people (Gutek, 2013). This fits with the aims of this study and provides a practical solution for a research practitioner in a social work setting.

In this study, some of the research questions can be better answered by the positivist lens; such as the cyberbullying prevalence rate (RQ2), the contribution of ecological factors to young people's cyberbullying behaviour (RQ3) and the psychological impacts of cyberbullying (RQ4) with quantitative data. On the other hand, the nature and subjective meaning of cyberbullying (R1)

is more suitable to be answered by qualitative data from an interpretivist lens. The service implication for young people suffering from cyberbullying can be better answered by using both qualitative and quantitative data for a comprehensive consideration.

Rationale for Utilising Mixed Methods

In light of the above discussion, both quantitative and qualitative methods were adopted in this study to formulate a two-phase mixed methods study. Moreover, data collected from different methods or sources can enhance the consistency of evidence, and the deficits of an individual method can be minimised by combining methods (Jick, 1979; Mertens, 1998).

In Phase One of this study, the qualitative method provided broad observations on the nature of cyberbullying, which informed the quantitative part of this study, and enriched the content in the discussion. In Phase Two, although the cross-sectional survey could not reveal causal relationships in cyberbullying, it could help reveal the correlation between the independent variables and measure the prevalence rate of cyberbullying and the impacts on young people. This will be useful in service design and planning to tackle the social needs arousing.

Adopting mixed methods can enhance the credibility of the analysis and interpretation of the research through triangulation of data. Furthermore, the use of multiple research methods can contribute to the reliability and validity of a study (Creswell & Clark, 2007; Patton, 2003). Triangulation is a navigational and land surveying technique; the location of an object's exact position can be calculated by use of multiple reference points (Smith, 1975). Triangulation in social sciences is a metaphor derived from surveying and navigation. According to Cohen and colleagues, triangulation is defined as an “attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint” (Cohen, Manion,

& Morrison, 2013). Other than triangulation, Greene, Caracelli, and Graham (1989) suggest other advantages to mixed methods: complementarity, development, initiation and expansion. In this study, the rich information collected from the qualitative method complements the results from the quantitative method to elaborate, illustrate, and clarify the findings to provide rounded information on the research questions (Johnson & Christensen, 2012) on cyberbullying impacts (RQ4) and service implications for the helping professions. Furthermore, young people's experience of cyberbullying can enrich the survey result with more in-depth discussion and explanation to provide a full picture of cyberbullying in Chinese society.

In terms of development, the researcher can use the results from one method to inform the second method sequentially (Johnson & Christensen, 2012). The findings from the Phase One interviews informed the Phase Two survey identifying and measuring the cyberbullying. This helps to discovering new perspectives, contradictions or paradoxes that can reframe the focus or framework of the study. It provides more insightful understanding of the question (Greene, Benjamin, & Goodyear, 2001).

All of the above advantages show that a mixed methods research design is more suitable for answering the research questions than either the qualitative or quantitative method alone. The integration of quantitative and qualitative methods can help to explore a new phenomenon in more detail and more comprehensively.

Research Design

The following paragraphs are presented to state, explain and justify the mixed methods research design in this study. This is necessary for the researcher to select the most suitable research

design to avoid relying on favoured approaches regardless of the topic to be considered (Robson, 2005).

There are four major types of mixed methods designs: triangulation, embedded, explanatory and exploratory design (Creswell & Clark, 2007, p. 59). Triangulation is the most common mixed methods approach to compare and contrast quantitative statistical results with qualitative findings, while the embedded design uses one dataset to provide supportive information based on the main dataset. An explanatory design is a two-phase mixed methods design starting with an initial quantitative phase, then using qualitative data to explain the quantitative phase results (Creswell & Clark, 2007). As there is no clear consensus in previous studies on cyberbullying measurement (Roberto, Eden, Savage, Ramos-Salazar, & Deiss, 2014; K. R. Williams & Guerra, 2007), gender difference (Li, 2006), personal and cultural impacts (Balakrishnan, 2015; Barlett et al., 2014; Taylor & Lonsdale, 2010), more contextual information was required to formulate a comprehensive quantitative study on Chinese cyberbullying in the initial stages. Embedded, and explanatory designs were not the most appropriate choices for this situation.

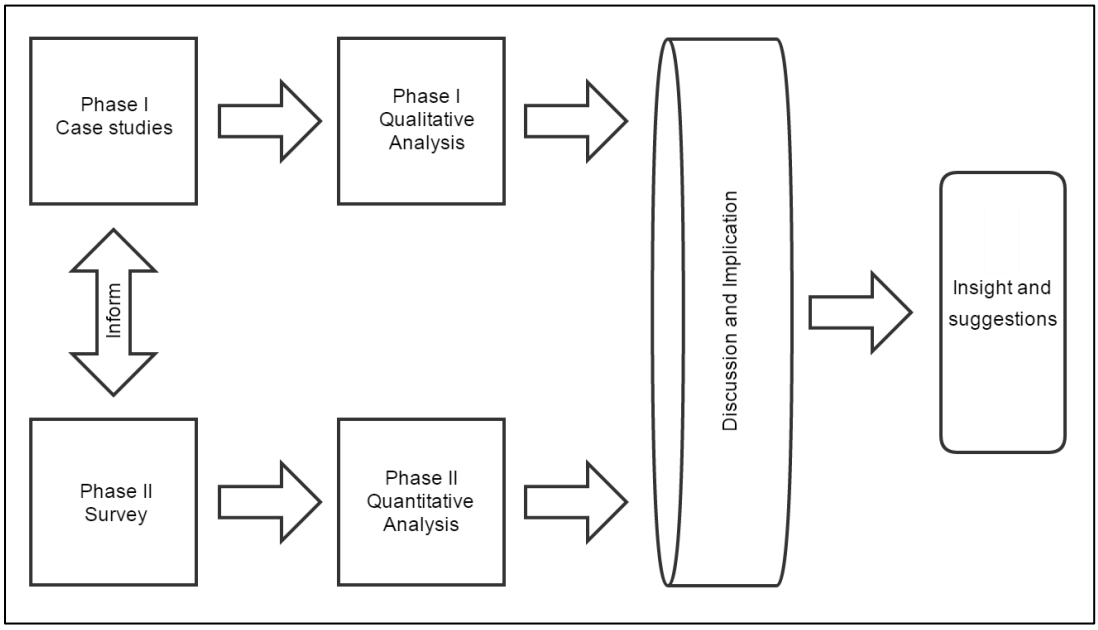
This study, therefore, adopted an exploratory design in Phase One and with data triangulation whereby the results of the first qualitative phase informed the second quantitative phase to verifying pervious study on cyberbullying with the self-developed instrument (Greene et al., 1989). The reason behind the design is that the information on the research topic's instruments, variables and guiding theory were insufficient. Therefore, it was needed to develop an instrument with adequate validity and reliability for measuring cyberbullying in the Chinese context for this study. As this design begins with a qualitative study, it is best suited for exploring a phenomenon (Creswell, 2013). Moreover, it is particularly useful for the researcher to develop an instrument

and identifies important factors to study in the quantitative phase. It is also suitable for generalising the research results for different groups, measuring prevalence and exploring a phenomenon in depth (Creswell, 2013; Greene et al., 1989).

Two-Phase Mixed Methods Design

In order to explain the various factors affecting cyberbullying, a sequential two-phase design was employed to study the phenomena (Figure 4). Phase One is exploratory in nature and Phase Two is verifying the previous studies on prevalence rate. The researcher collected qualitative data in the first phase; the qualitative results informed the Phase Two study when quantitative survey data were collected. The analysis and interpretation part of the study refines and explain the statistical results by returning to the in-depth interviews and collecting subjective views about the research topic (Creswell & Clark, 2007).

Figure 4 *Two-phase mixed methods design adopted in this study*



This study started with qualitative interviews in the first phase; the findings were used as a source of information to develop the data collection instrument in the second phase study. Both the qualitative and quantitative result were used in the overall interpretation in this study. The suggested design can minimise observation bias and enhance the research credibility using the triangulation measures mentioned. In addition, the researcher can conduct the two methods in separate phases and collect one type of data at a time. Along with the pragmatic nature of this study, this is more practical data collection when compared to other mixed methods designs, which might require a research team to carry out both types of data collection methods at the same time (Johnson & Onwuegbuzie, 2004, p. 21). Moreover, it is a more pragmatic method to carry out the study in a time- and resource-limited scenario in a local social service setting.

However, Creswell and Clark (2007) further note the limitations of a mixed methods design: the length of time the study takes and the large amount of resources required to collect both types of data. Another obvious difficulty is finding appropriate research partners in the different cities. These issues were partially solved by using the researcher's previous service network with the support of their NGO in the corresponding cities. The lengthy data collection period in a sequential research design is still a constraint for the study. The time lapse from the Phase One interviews to the Phase Two survey was over a year; substantial changes in technology and social media platforms may have occurred during this period.

To sum up, the research questions were interpreted and answered with both phases' results. This helped to explore nature of cyberbullying, the significant factors affecting young people's cyberbullying behaviour, psychological impacts, and measure of prevalence rates. The potential predictors of cyberbullying can inform the supportive service design for young people in need. In

addition, triangulation among different sources of data was used as a measure to minimise research bias.

Triangulation in this Study

In order to enhance the credibility of this study, triangulation was adopted. Turner and Turner (2009) describe various types of triangulation in social research: data, investigator, and methodological. The study tried to apply different types of triangulation to enhance the credibility of the observation results. Data triangulation involves time, space, and people. The time constraints in this study meant that only current data were collected, and were not compared with past and future data in the existing research design. For data triangulation in space, three cities' case studies including Hong Kong, Macao and Guangzhou were involved in the Phase Two data collection. The people involved in the data triangulation were the different players in cyberbullying: perpetrators, victims and young people not involved in cyberbullying. In addition, three independent NGOs in the respective cities were invited to be research partners and offer help in the Phase Two data collection, with the coordination of the researcher. This achieved investigator triangulation. In the methodological triangulation, a literature review and quantitative and qualitative research methods were applied to gather data on cyberbullying.

Ethical Considerations

The researcher has the responsibility of searching for knowledge and real situation; furthermore, they need to protect the participants in the research process (Cohen et al., 2013, p. 56). The areas of obtaining consent, protection from harm and safeguarding the privacy of the participants are also important ethical concerns for the researcher.

The research proposal was examined by the Bristol Graduate School of Education, Research Ethics Committee (GSoE) and as such was deemed to meet the University's ethical guidelines for research in respect to confidentiality, data storage and protection, and anonymity in the implementation of the study (Appendix 1). Moreover, institutional approval was collected before the study (Appendix 2). This is necessary for studying the clientele of the organisation; a research proposal should be submitted to the organisation to obtain their approval prior to conducting the study (APA, 2010, p. 10).

In social sciences, informed consent is another important issue when conducting research. The application of informed consent was carried out according to the latest APA ethical principles (APA, 2010). Participants were informed of the objectives and benefits for the study; the usage of data; the timeframe in which the questionnaires would be destroyed. The contact details of the researcher and further information about the study were made public on the website of the respective organisation. The following paragraphs focus on the ethical issues of particular relevance for this study.

Privacy and Sensitive Topics

Cyberbullying is a sensitive topic and cyberbullying behaviour is not generally accepted, therefore, research participants disclosing their personal experience of cyberbullying may contribute to negative stigma. As informed from previous studies, cyberbullying victimisation is correlated with negative emotions, and recall of the cyberbullying experience through the study might result in emotional disturbance or the participant feeling uncomfortable. Several measures were adopted to protect the participants. For example, the disclosure of information was limited to information that was necessary to accomplish the study only. No participant personal data and

contact information was collected from either phase of this study. The researcher could only contact a participant with the arrangement of a social worker. The participants were given pseudonyms during the whole interview process.

Research-practice Partnerships

As a researcher and social work practitioner, the researcher was aware of the importance of research-practice partnerships. In this study, three NGOs in various cities worked with the researcher to find out the latest information on cyberbullying. This was a new attempt based on our long-term working collaboration with the NGOs in Macao and Guangzhou for more than a decade. The long-term nature of the partnership developed a trustful relationship between researcher and the involved NGOs.

The partnership benefits both researcher and practitioner. It helps to ensure different perspectives can contribute to define the focus of the study and learn from one another. The NGO and service provider can gain insights into the social phenomenon and design service for needy young people (Coburn, Penuel, & Geil, 2013).

Ethical Issues in Data Collection

The ethical issues in qualitative research are particularly important because the research tends to focus on the participants' thinking and private lives, and places these accounts in public (Miller, Mauthner, Birch, & Jessop, 2012). The British Psychological Society (2010) suggests guidelines and areas of concern when conducting qualitative research, including avoidance of harm to participants; ensuring informed consent; respect for privacy and avoidance of deception.

In Phase One of the study, an in-depth interview was conducted about the participants' past experiences related to cyberbullying. As a social work practitioner, the researcher's counselling background made him more capable of engaging with the participants to share their personal experiences of cyberbullying. At the same time, the researcher had to be aware that the participant might confuse the roles of researcher and counsellor in the interview, as the participant may have a trustful relationship with the involved social worker and the researcher. The researcher told the potential participants that the interview was not part of the existing counselling process. Moreover, informed consent and clear briefing on the research aims were done before the data collection. As the research topic is sensitive in nature and some of the participants were underage, the social worker was invited to join the interview to accompany their client and safeguard the participant's right to withdrawal in the interview process. Moreover, this was also a precautionary measure for any emotional disturbance aroused by recalling the cyberbullying experience. The right to refuse and withdraw from the interview were clearly told to all participants by verbal reminder and document.

To minimise harm to the participants, the researcher told the participant that they were free to stop at any time if they did not want to continue the interview. For informed consent, each targeted participant received an information sheet about the research before the interview. The social worker or staff member of the NGO arranged the interview only if they obtained the consent of the participant to take part in the study. Every participant was assigned an identification code in the research process to protect their privacy. No personal identification can be retrieved from the contents of the interview. All personal data were protected according to the requirements stated in Hong Kong Law Chapter 486: Personal Data (Privacy) Ordinance (Hong Kong, 2013).

In Phase Two of this study, the survey involved more than 2,000 Chinese young people. The anonymity of the respondents presents an ethical concern: cyberbullying is classed as socially undesirable behaviour, which means that it is difficult for the victims or perpetrator to report such behaviour under their own identity. The use of anonymous self-reports is the most appropriate method to collect data related to bullying (Whitney & Smith, 1993, p. 3). Hence, no personal details were collected in the survey, but personal characteristics and psychological attributes were measured and collected for analysis. The service recipients of the cluster NGO were invited to complete the questionnaires randomly. The NGOs collected the completed questionnaires in a collection box; no personal identifying information was collected from the respondents. When something brought up bad memories and adverse psychological feelings in a participant in answering the survey, a counselling support service was provided by the local research partner NGO. The precautionary wording of the survey and counselling service hotline was printed at the end of the questionnaire (

Appendix 10: Phase Two Survey Questionnaire).

Moreover, researchers using surveys have the ethical responsibility to not waste their target respondents' time and effort in completing the questionnaire; thus, the survey only collected necessary data (Drew, Hardman, & Hosp, 2008, p. 70). The results were announced after Phase Two of the survey. It was expected that the survey's results would arouse the public's concern for this new social phenomenon and provide service directions for the involved NGOs.

To conclude, the participants in the case interviews were vulnerable teenagers in this cyberbullying study. The above ethical concerns and measures were addressed to protect the rights of the participants. Moreover, safety precautions and support services for the interview participants and survey respondent were provided by the involved NGOs.

Chapter Four: Qualitative Study on Cyberbullying (Phase One)

Introduction

The cyberbullying experiences of Chinese young people are the groundwork of the whole study. In the last decade, a number of studies have focused on measuring cyberbullying harm and risk on young people, and only a few have been concerned about the nature and process of the cyberbullying experience (Livingstone, 2013). Conversely, the experience may be good for young people's life skills development. Coleman and Hagell (2007, p. 14) state that "resilience can only develop through exposure to risk or to stress". Young people need to learn to take calculated risks and cope with the consequences. It helps to develop their resilience through gradual exposure to risk at a manageable level. In this study, I adopt a nuanced view in order to consider the complexity of cyber bullying behaviours.

This part of the study adopted qualitative methods; it was exploratory and interpretative in nature. This phase focused predominantly on the cyberbullying experience of participants. The participants' narratives of their experience can help the researcher to develop an in-depth understanding of cyberbullying through listening, interpreting, and retelling their stories (Lincoln & Guba, 1985). The social context influences one's understanding of reality (Denzin & Lincoln, 2011). Examining the direct experience of participants helps us to understand how the social reality of cyberbullying is constructed among young people in Chinese society.

This chapter starts with the research question and rationale for the use of the qualitative method. Then, the methodology is presented, including the selection of participants, pilot test, inquiry procedure and method of data analysis. In the results section, individual cases, cross-case analysis, and the implications for the Phase Two study are presented

Researcher Reflexivity

In qualitative research, subjectivity can motivate and illuminate the researcher's personal research (Glesne, 2016). Preissle (2008) states that a subjectivity statement can help researchers to become aware of the influence of their beliefs, experiences and cultural standpoints on their attitude towards the research subject and phenomenon. In addition, the statement can convey this information to the reader for their assessment of the study's credibility (Preissle, 2008). A subjectivity statement is also a self-reflection process for the researcher. It reminds the researcher that they should be aware of their own values or experiences with the phenomenon and acknowledge them in the study (Creswell, 2012). Therefore, I have stated my own reflection by reviewing my own prior working experiences with young people and cyberbullying. The following describes the researcher's personal position in relationship to cyberbullying.

As a professional social worker specialising in at-risk youth for 25 years in Hong Kong, I have witnessed many bullying and cyberbullying incidents among young people. In the counselling process, we are usually focused upon the problem and the harm to the victim. This may urge me to focus on the detrimental impacts of cyberbullying. In that sense, my concern and care for the perpetrator are very limited. This reflection reminded me to take a fair and balanced view of both perpetrators and victims in this study. As the literature mentions, I started to become aware that cyberbullying is not just an aggressive behaviour; it is enmeshed with the lives of young people in complex ways (Lenhart et al., 2011; Marwick & boyd, 2014).

Related to my previous work and experience of talking with young people who have experienced cyberbullying, I had some assumptions regarding what I expected these participants would offer about their cyberbullying experience. The following are those assumptions:

1. Bullying experiences are very common among young people; this is because verbal and physical aggressive behaviour are frequently observed in my service setting. Some of the bullying cases were intertwined with cyberbullying.

2. The social environment imposes a significant impact on young people's cyberbullying behaviour; Young people in crisis is usually nested with some issues or problems in their Microsystems. Family, school and peers are the main intervention focus in our counselling process.

3. In my previous counselling experience with youth-at-risk, teachers, social workers and parents can play a significant role in helping young people to get through the crisis.

4. Young people hesitate to recognise themselves as cyberbullying perpetrators or victims.

In this study, I tried to set aside my assumptions and subjective feelings to minimise their influence on the interpretations of the cyberbullying experience described by participants. However, subjectivity is still inevitable. This echoes Peshkin (1988, p. 17) statement that "one's subjectivity is like a garment that cannot be removed". The subjectivity statement and assumptions reminded me to be aware of how the influence of my subjectivity may be shaping this study. It may also be a practical advantage in using my counselling skills with young people to understand what is going on among the participants. The helping profession's communication techniques such as active listening and awareness of nonverbal cues can facilitate better understanding and responses in the interview process. On the other hand, in spite of the researcher's experience with bullying and cyberbullying cases, the claims should be based on the data obtained from the study to reduce bias and prejudices.

Research Questions

The aim of the Phase One study was to explore the cyberbullying experiences of Chinese young people. Therefore, the research question should be broad enough to help participants give their personal experience freely. Interview guidelines can be developed to facilitate the interview but not limit the scope of inquiry (Pietkiewicz & Smith, 2014). The research question in this phase is: "In what ways do the participants describe their experiences of cyberbullying incidents?"

Rationale for the use of Qualitative Research

Cyberbullying behaviours and participation of young people have become more complicated (boyd, 2014). As mentioned in the literature review, recent studies on cyberbullying among Chinese people are limited. As discussed in Chapter Three, the qualitative study can provide updated information to inform the development of the survey instrument in the Phase Two quantitative study. The Phase One findings and themes identified can help to explain the survey results and vice versa.

The duplicated role between perpetrator and victim, perceived anonymity and varied forms of cyberbullying make it more difficult to seek full picture about the phenomenon (Hinduja & Patchin, 2008; Kowalski & Limber, 2007; J. Wang et al., 2010). As such, qualitative research focuses on how social experience is created and given meaning (Denzin & Lincoln, 2011). It helps the researcher to understand how the social reality of participants is constructed. As informed by ecological system theory, young people's experiences of cyberbullying are influenced by the interaction of their ecological systems with their growth group environment (Bronfenbrenner, 2009). Hence, it is more meaningful to explore the cyberbullying phenomenon in a social context instead of as a single aggressive behaviour of young people. Qualitative methods offer an effective

method of inquiry on the interaction between various systems in the ecological environment of cyberbullying cases.

To begin the inquiry process, the participants' experiences are presented to provide a brief picture of the cyberbullying cases. This can help focus on the participants' perceptions of cyberbullying, and show how the ecological factors play a role in cyberbullying incidents. Moreover, it is helpful to unearth important discourses on cyberbullying. People suffering from these sensitive incidents can voice their experiences and feelings that may be difficult to dig out through quantitative techniques. On the other hand, the voice out of unhappy experience can help the participant to gain relief from emotional problems (Greenberg, Wortman, & Stone, 1996). It was an appropriate approach for this study as it allowed for the detailed exploration of the participants' personal experiences of cyberbullying. Then, the researcher highlights and comments on the themes that emerged from the cases in a cross-case analysis (Glesne, 2016). The findings were developed from the analysis of the five research cases.

Through this in-depth qualitative research, the researcher wanted to listen to the voices of the young people in order to build on these findings in formulating a grounded behaviour checklist for measuring the cyberbullying prevalence rate among Chinese young people in the Phase Two study. Furthermore, the themes that emerged from the stories, such as cyberbullying's impact and influence on young people, as well as help-seeking behaviour, were explored in this phase to provide contextual information for local social service organisations and schools to tackle the problem. The personal experience of participants provided a vivid description of the feelings and thoughts of young people involved in cyberbullying incidents. These qualitative findings might help social service providers to understand cyberbullying among young people more empathically. Understanding of the local cyberbullying process can provide insight for NGOs designing and

developing new supportive services for young people through the research-practice partnership (Coburn et al., 2013). The partnership can reinforce the communication and knowledge-building among the helping professions in developing effective service models and collaborations for serving clients in need (Garland, Plemmons, & Koontz, 2006). The researcher-practitioner role in this study further inspired the application of the research findings in service design and planning for young people affected by cyberbullying.

Methods

The history of telling stories goes back as far as humans have been able to talk. In undertaking a qualitative inquiry, Chase (2007, p. 59) states that "a narrative may be oral or written and may be elicited or heard during fieldwork, an interview, or a natural occurring conversation". Carter (1993) suggests that the inquired story is like a novel: it should include a conflict or struggle, a main character and a plot that ends in resolution. The researcher needs to gather lived stories from the participants and re-story them into meaningful concepts; an informal tie between the ideas will be built up in the re-storying process (Creswell, 2012). Qualitative data was collected to provide a rich context to understand cyberbullying in Chinese society. In-depth, face-to-face interviews were employed as the main data collection measure here.

The following paragraphs describe the pilot test, selection of participants, inquiry procedure and method of data analysis.

Pilot Test

Good preparation of the interviews is essential to facilitate the sharing of participants. Therefore, a pilot test is necessary to find any potential flaws and weaknesses in the interview design. The test results can help to make possible enhancements before the actual implementation of the interview (Kvale, 2008). The interview arrangements and setting should be in a comfortable and well-protected environment so that the participants feel more at ease when sharing information. Creswell and Clark (2007) highlight the importance of getting participants who will share their story honestly and openly.

The interview questions and programme were developed and refined in a pilot test conducted with a sample of five young people, two male and three female, in the age range 16 to 21 years. The purpose of the pilot test was to find out which proposed questions and methods could best facilitate the participants to share their cyberbullying experience. The consent letter, parent approval letter, ethical procedure and supporting counselling service arrangements were open for consultation. The participants were asked to give feedback on the interview process, questions and the related procedures. Another purpose of the pilot study is to test the effectiveness of the timeline drawing methods employed in the interview process to facilitate the participant in telling their experience of cyberbullying (Bagnoli, 2009).

The participants were asked for their comments on the interview procedure and arrangements. A number of issues were identified and dealt with as follows. Firstly, the participants found that the interview introduction was important for them to understand the purpose of the interview and the scope of sharing. Some of the participants said, “I am more willing to share my story” after knowing their sharing could help other people with similar experiences. Secondly, a common view amongst participants was that there were too many questions on cyberbullying.

They would prefer more open-ended questions, so that that they could share their experience more freely. Thirdly, they agreed that the use of alternate means, such as timelines and drawings, was helpful in formulating their story more clearly and precisely. Fourthly, the participants felt more comfortable and safer if their familiar social worker could join the interview. They also welcomed comments and suggestions from their social worker about their behaviour in the cyberworld. Finally, the length of the demographic questionnaires after the interview was suitable. The average completion time was five minutes. Ecological system theory and literature suggests that Microsystems including family, peers and school play a significant part in the life of young people (Bronfenbrenner, 2009; Espelage, 2014). The participant's responses were in line with those of previous studies and agreed that family, peers and school are important elements in their own experience. Together, these pilot test results informed the study in the following ways. A clear and precise study introduction was seen as good to prepare the participant to join the interview. Timeline drawings were a useful and feasible method in facilitating the participant to share their personal experience. Moreover, the interview questions had to be greatly reduced and transformed into open-ended questions. Social workers were invited to join the interviews as supporters in the interview process.

Selecting Participants and Research Partner

Selecting participants is an important step in the inquiry process, but there are no concrete rules for sample size in qualitative inquiry. It depends on the purpose of the inquiry, credibility and the balance between limited resources and what can be done within the limitations. Patton (2003) contends that "the validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected than with sample size". Qualitative

research tends to be more focused on the detail and depth of the case: it is more critical to establish criteria to select participants who can provide valuable input leading to a stronger understanding of cyberbullying in the local context. A small number of important cases can yield the most information from the interview (Polkinghorne, 2005). This study will focus on cases "that are rich in information because they are unusual or special in some way" (Patton, 2003). Individuals were purposefully sampled in this study on the basis of the participants' experience of the phenomenon (Creswell, 2012).

To access cyberbullying cases for the inquiry, the researcher wrote to the NGO with the research proposal to apply for the agency's support for this study. Approval for, and support of, the research project was gained from the agency to offer access to their counselling service recipients (Appendix 2: Agency Approval Letter). The service unit and social worker list were provided by the agency. A total of 156 social workers from 20 service units received a copy of the research invitation letter, which delineated the goal of the study and briefly explained the data collection procedure.

The social workers were asked to invite clients with personal experience of cyberbullying to join the interview. This measure increased the chance of the potential participants accepting the interview; the invitation letter clearly presented to the participant the difference between their on-going counselling and the study (Appendix 3: Research Participant Consent Letter).

With the support of Hong Kong social service organisation in this study, the researcher could identify participants who were personally involved in cyberbullying. The NGO's existing youth service network in the community has a good connection with local young people. The counselling case profiles presented in their annual report involved a number of bullying and cyberbullying cases, providing potential participants for this study (HKPA, 2015; Wan, 2008). The

researcher located the participant based on the following criteria. Firstly, they were Chinese young people. Secondly, the participants had previous experience of cyberbullying. Thirdly, they had a trustful relationship with the NGO social worker. Not all interview invitations were accepted: only six of the potential participants fulfilled the above criteria and accepted joining the interview. However, parental consent was not given for one of the invited young people. Only one young women and four young men joined the interviews. They were receiving counselling services from the outreach social work team, a service project for school dropouts and a service project for young night drifters. Four involved social workers helped the researcher to arrange interview with the young people in their community office.

Finally, five Hong Kong young people, aged from 15 to 20, were interviewed during the summer of 2015 (Appendix 5: Phase One Interview). All of them had encountered cyberbullying in their personal experience from two months to three years previously. The following data were generated from the background questionnaire to provide a detailed description of the individuals for analysis. All the names in the case presentation are pseudonyms.

Table 2 *Descriptions of the interviewees*

Case	Name	Age/ Gender	Internet Platform
1	Mary	20 / F	Facebook
2	Yin	15 / M	Facebook, WhatsApp, Forum
3	Ken	16 / M	Facebook
4	Zurg	15 / M	WhatsApp
5	Raymond	18 / M	WhatsApp, SMS, Phone

What follows is the connection between researcher and participants. Rapport building is a key to success in qualitative inquiry (Glesne, 2016). Creswell (2012) also emphasises the importance of recruiting participants who are willing to share their own experience openly and

honestly. It is easier for a participant to share their story with some familiar faces. The involved social worker was the key person providing counselling for the participant. A trustful relationship had been built between them in the previous counselling process. The presence of the social worker in the interview let the participant feel more comfortable to share their personal experience with the researcher.

Data Collection

Rich and first-person accounts local young peoples' stories are valuable to illustrate the lived experience of cyberbullying. However, this requires the training and skills of the researcher. The interviewer is preferably equipped with strong interviewing skills such as active listening and rapport building to gain the trust of participants (Pietkiewicz & Smith, 2014). Moreover, the researcher should be aware of offering flexibility and enough space for the planned questions and unanticipated issues arising in the interview.

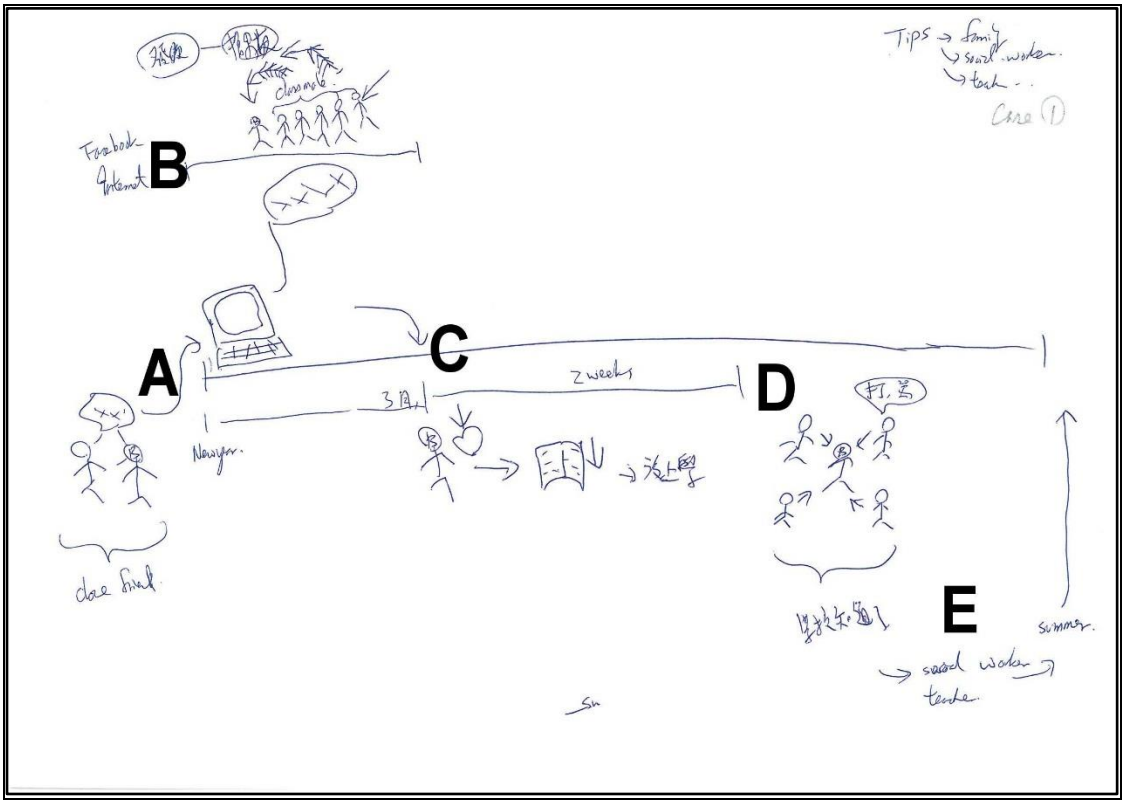
In order to enhance the richness of the case description, multiple sources of data were collected (Ivankova, Creswell, & Stick, 2006, p. 8). This is especially useful for those participants who are not good at oral presentation. Skills borrowed from play therapy and counselling micro-skills can help the participant to visualise their social relationships and experiences (Freeman, 2000; Hall, Kaduson, & Schaefer, 2002). Therefore, timeline and metaphor drawing were employed to facilitate the participants to present their cyberbullying experience in a systematic way. Drawing is an effective means of communication suggested by Landreth (2012) to facilitate children and adolescents to express their story and feelings in an interview. The timeline drawing is sketched out simultaneously with the interview process by the researcher and the participant comment on the accurate of the description; the main characters, aggressive actions and sequence

of interaction are presented in simple graphics. The plot and end of the experience can be clearly described by the drawing.

The timeline picture in this study was co-created between the participant and researcher to present the cyberbullying experience in a simple drawing. Moreover, the timeline was used as a means for member checking after the interview to enhance the credibility of the study only, no further analysis on the drawing in this study (Patton, 2003).

In the interview drawing process, the participant is given the opportunity to modify and amend the picture to correct the researcher's misunderstanding of their story (Figure 5). All the cases timeline drawing and remarks are attached in Appendix 8: Timeline and Metaphor Drawing of Cases.

Figure 5 *Timeline and metaphor drawing*



Moreover, the member checking process allowed the participants to be one of the narrators of their story instead of it being understood from the researcher's perspective only (Jovchelovitch & Bauer, 2000).

Inquiry Procedure

After the participants had been selected, interviews were conducted to inquire into the young people's cyberbullying experience. There are three main types of interview design in a qualitative study: structured, semi-structured and unstructured interviews (Creswell, 2012). Unstructured interviews would be the most suitable approach to explore the cyberbullying phenomenon, as they provide the highest flexibility for the participant to share their 'lived experiences'. However, as the goal of this study aims at enhancing the helping profession in providing support for young people in cyberbullying, semi-structured interviews were selected for this study as they provide a flexible and pre-determined scope of inquiry to focus on the impacts and help-seeking patterns in cyberbullying incidents. Despite adopting a semi-structured approach, it was important that the interview was as conversational as possible, in order to ensure the young people felt at ease with the researcher. The researcher extended the questions based upon the flow of the interview. In addition, the semi-structured interview format helped the researcher to focus on the conceptual framework adopted in this study suggested by ecological system theory (Bronfenbrenner, 2009).

Based on the literature review and the researcher's observations, some specific questions on cyberbullying were incorporated in the interview questions (Appendix 5: Phase One Interview). The researcher asked the questions to guide the interview in the inquiry process. The questions on cyberbullying were developed as open-ended to facilitate the participants presenting their story

without constraint. As informed by ecological system theory and previous studies, some broad themes were identified such as family, peers, school, technology and impacts (Bronfenbrenner, 2009; Gámez-Guadix et al., 2013; Johnson, 2010; P. Smith et al., 2006). The following are the interview questions used in case interview (Appendix 5: Phase One Interview Questions).

1. How have you been engaged by the social workers?
2. What is your relationship with your friends?
3. What is your school life?
4. What is your relationship with your family?
5. What is your relationship with neighbor and church
6. Could you share with us on your most impressive cyberbullying experience?

With the support of the agency and service unit within the community, private interview rooms were arranged to ensure the privacy of interviews. The social worker and interviewer both checked the approval letter and consent form from the participant and participant's guardian before the interview. In the interview introduction, the researcher restated the research goal, the procedure and the possible risks anticipated. Moreover, the researcher emphasised that the interview was not part of the counselling process, and the invited young people could refuse and withdraw at any point of the interview. As a precautionary measure, the interviewees were informed of follow-up counselling services and given the contact details about the researcher and the researcher's supervisors.

Finally, five Hong Kong young people (1 female, 4 male) aged from 15 to 20 participated in 40 to 90 minute semi-structured face-to-face interviews conducted by the researcher. All the

interviews were digitally audio-recorded. The specific questions listed in the interview guidelines were asked in a conversational manner to explore the participants' responses and descriptions of their cyberbullying experiences in their own words. The open-ended questions allowed the participants to express their views without being restricted by the researcher.

Two local university undergraduates with fluent Chinese and English were recruited and trained to transcribe the audio record of the interviews into full text with time stamps. All the interview dialogues could be traced and listened to again from the time stamp marking. The data collected was then collated and analysed using the qualitative software NVivo10 for coding, storage, node and theme development. In qualitative research, it is essential for the researcher to do multiple readings and note-taking on the phenomenon. The personal identity and information of the participants were kept strictly confidential to protect the privacy of all participants according to legal requirements in Hong Kong (Hong Kong Government, 2013b). The researcher kept the content of all the interview data confidentially and deleted and destroyed all documents containing the contact information for the participants after the study.

Moreover, the participants' experience of cyberbullying provided a second data source for comparison and triangulation with the Phase Two survey data in the discussion chapter. This can minimise the observation errors in mixed methods studies(Creswell & Clark, 2007).

Method of Data Analysis

In qualitative inquiry, Glesne (2016, p. 193) states that "data analysis is the process of organizing and storing data in light of your increasingly sophisticated judgments, that is, of the meaning-finding interpretations that you are learning to make about the shape of your study".

There are various forms of qualitative data analysis such as conversation analysis, narrative analysis and thematic analysis. Conversation analysis is good at exploring the meaning in the inquiry process and communication through natural conversation; whereas narrative analysis focuses on how participants construct meaning from their experiences into meaningful stories and the telling of stories (Glesne, 2016). Both types of analysis are powerful in exploring the social experience of participants, but not for concentrating on a social phenomenon.

Thematic analysis emphasises creating an understanding of the social phenomenon through revealing underlying complexities, patterns and themes in the interaction between participant, settings and cultural factors. Braun and Clarke (2006, p. 6) state that "thematic analysis is a method for identifying, analysing, and reporting patterns within data". Furthermore, thematic analysis is flexible, can generate new insights and allows the study to be informed by the theoretical framework. Themes can be generated from inquiry data inductively, or deductively from prior research and theory (Braun & Clarke, 2006).

This study was grounded in ecological system theory and prior empirical findings on cyberbullying. Ecological system theory informed the study with the idea that family, peers, school, technology and personal factors are significant systems affecting young people's development (Bronfenbrenner, 2009). These factors were used as broad themes to understand the data during the beginning phase of the analysis. Then, the emerging themes from the data were organised around the broad themes in the analysis. The interpretation of the data and thematic map generated from thematic analysis can provide an intuitive picture among the themes, ecological system and cyberbullying incidents. This is an useful approach for finding common thematic elements among research participants (Riessman, 1993). Braun and Clarke (2006) provide six practical steps for performing thematic analysis, as shown in Table 3.

Table 3 *Steps of thematic analysis*

Steps	**Description of the process**
1. Familiarising yourself with your data	Transcribing data
2. Generating initial codes	Coding the data
3. Searching for themes	Collating codes into potential themes
4. Reviewing themes	Checking in the themes, and generating a thematic map of the analysis
5. Defining and naming themes	Ongoing refine the theme, and the overall story the analysis tells; generating clear definitions for each theme.
6. Producing the report	Selection of extract examples, relating back of the analysis to the research question and literature

Source: Adapted from Braun and Clarke (2006, p. 35)

Firstly, the process of analysis started in the data collection stage when the researcher looking for patterns within the data. In this study, the researcher could not easily immerse himself into the culture and context of cyberbullying within a short period of time. However, the researcher could listen to the people involved in cyberbullying and attempt to see the world from their point of view in the interviews, then transcribing the interviews and repeated reading of the data.

The audio recorded interview cases were transcribed and stored in according to the timestamp on every case. The following are the format of transcribed interview

Time	**Questions**	**Researchers**	**Content（May）**
0:55	**A1**	不如你先簡單介紹一下自己。	
1:10			我是女生，今年 20 歲，現在就業。
1:19	**B1**	你什麼時候（開始）認識呀清姑娘？	
1:23			
1:25		3 年前，17 歲的時候認識呀清姑娘。在哪裡認識呢?	
1:31			在旺角公園。

This is a key stage of analysis to help the researcher to familiarise themselves with the data collected (Bird, 2005). Timeline and metaphor drawing were adopted as a member checking measure to confirm the interviewer understood the cyberbullying incidents. In order to organise and manage the data in a systematic way, the data was stored and analysed using the computer-assisted qualitative design analysis software named, NVivo10, developed by QSE International. All the data generated from the interviews, including audio recordings, interview transcriptions, questionnaires, timeline and metaphor drawings, were stored and organised by the software. The programme helps to sort, classify and arrange a great deal of information, to explore trends and examine relationships in data. The interview raw data, significant statements, researcher comments and theme coding are managed in a single platform for further analysis on cyberbullying. The typed transcribed notes were segmented into logical sessions and marked with time stamps. A NVivo operation screen were captured to show the details of coding the interview content (Appendix 7: Phase One NVivo). This allowed easy access to the audio recording of the relevant part of the interview through the software. Cross-checking of the original audio responses from interviewees was possible for reviewing the data in the analysis process. Finally, the interview was transcribed into 103 pages with more than 21,896 Chinese words in total.

Secondly, the researcher developed the initial coding from the theoretical framework and the data. The coding framework was based on ecological system theory and significant elements identified during the literature review. The researcher read through the interviews again and again in this step. The coding process is part of the analysis, organising data into meaning groups. Thirty-seven codes were proposed from the broad themes and theoretical framework (Appendix 7: Phase One NVivo).

The third step was collating codes into potential themes. The codes were organised into themes like a tree pattern. Potential themes contained several related subsets or branch themes (Glesne, 2016). The collected themes in the process were compared with the main themes informed by the literature and ecological system theory. The potential themes identified in the transcribed notes were gathered and stored. Newly identified themes that did not seem to belong anywhere were initially stored temporarily. A total of twenty-one new codes were created during the coding process. Then, the free themes were organised conceptually into a hierarchical form as a branch connected to an overall thematic tree node (Glesne, 2016). The operation of collating codes into tree pattern theme in this study was captured in Appendix 7: Phase One NVivo Operation.

The fourth step was refinement of the developed potential themes. True themes should have enough evidence from the data to support them. Then a thematic map was generated from the themes to show the connection between them. Some potential themes generated in the earlier steps were merged or abandoned to avoid overlapping with others. This is an on-going process of further reviewing and refining the coding into a satisfactory thematic map (Braun & Clarke, 2006).

The fifth step was developing an overall meaning or story from the thematic map. The theme should have a clear definition and meaning. Each theme was refined with a detailed analysis and identified story in related to the overall inquiry. The analysis process in this step lasted for more than six months, with several discussions with the academic supervisor, where the researcher revisited the previous step and analysis after each discussion. In addition, the researcher maintained his reflexivity by reminding himself of his own biases in the analysis process. For example, the researcher always maintained a non-judgemental attitude towards the young people involved in cyberbullying. The empathy and non-judgemental attitude of the social work

profession are in line with this type of research method (International Federation of Social Workers, 2014).

The final step was the analysis and answer to the research questions with sufficient evidence and extracts of the themes within the data. The extracts were embedded within the researcher's analysis illustrating the theme, and arguments were made about the research questions (Braun & Clarke, 2006; Glesne, 2016). As a social work practitioner and researcher, the researcher tried to select participants' wording that was similar to the pattern suggested in the literature and organised into theme (Yin, 2013). My previous working experience helped me to understand the position and environment of individual participants. On the other hand, the comment and analysis may be inclined towards the helper's perspective subject to my attitude stated at the beginning of this chapter.

Results

Connelly and Clandinin (1990, p. 2) state that "humans are storytelling organisms". The researcher organised and retold the collected case stories so they can serve as a primary means for understanding the life experiences of the participants (C. C. Wang & Geale, 2015, p. 195). After multiple readings and listening to the audio record for familiarisation with the data and identification of the significant statements in the interview, the researcher started to understand the participants' stories and their journeys in the cyberworld (Braun & Clarke, 2006).

At the beginning of the results section, the participants' demographic data and background information are presented in five stories to describe their social environment in an ecological perspective. After that, cross-cases analysis is used to illustrate the themes, using excerpts from

the interviews (Glesne, 2016). Bronfenbrenner's (2009) ecological system theory provided a reference for the researcher to identify the potential themes and other themes emergent from the participants' experiences with cyberbullying.

A total of 348 significant statements were identified during the interviews and coded into 12 themes. Some codes were discarded due to irrelevance to the research questions during the data analysis process (Appendix 7: Phase One NVivo). Finally, the emergent themes from the data are presented and discussed in relation to the research questions.

The Five Stories of Cyberbullying

As the roles of the participants and the nature of cyberbullying vary, the five participants' personal stories are presented under the headings of cyberbullying incidents, impacts and help-seeking behaviour to illustrate the interaction among the people involved. The participants' personal experience of cyberbullying and case development have been organised to provide an overview description of their experience and essential basis. Through these stories, we can understand cyberbullying incidents in the social context and the actual feelings of the young people (Denzin & Lincoln, 2011).

Story 1: Struggle with Best Friend

Mary's Ecological Environment

Mary is a 20 year old girl. She works full-time as a boutique salesperson in Hong Kong. The Hong Kong outreach social worker serves youth-at-risk in the street or playground to provide support and counselling in the community (Hong Kong Council of Social Service, 1988). A social worker approached Mary on the corner of Mongkok Street three years ago, when she was a student at a school without a good reputation. Mary usually hung around in the street after school and did not have a good academic performance. A close and trustful relationship has been built between Mary and her social worker over the last three years' counselling process. The interview was conducted in the counselling room in the outreach social worker's office. This is a room with colourful youthful decorations and a sofa with enough privacy for sharing. Mary was very familiar with the environment as she usually joins activities organised at this centre. Mary came to the interview with her boyfriend after work. As her boyfriend was not involved in the incident, he stayed in the lobby to read magazines and play smartphone games during the interview period. Mary's family support is relatively lower than others'. Her parents are divorced. She lives with her mother and young brother; she feels that her relationship with her mother is good.

Significant Cyberbullying Incident

Mary is a cheerful and talkative young woman. Although she did not know the researcher before, she shared one of her most unhappy experiences in the cyberworld with the facilitation of her social worker. The social worker's positive introduction built up a basic rapport between Mary and the researcher. The social worker and the researcher explained the aim of the study is

understanding of young people suffering from cyberbullying and providing service implications for the NGO. Moreover, her social worker stayed with her for the whole interview.

The incident happened five years ago: her defensive body language posture through the whole interview showed that she still has uneasy feelings recalling the memory. She said:

> *"I had a sad experience in the cyberworld five years ago, and the bully was my best friend."*
>
> *"The incident started in the second semester in my Secondary 4; this is the first year of my senior form in Secondary school. I had four best friends in my class; we knew each other very well."*
>
> *"At that time, my classmate Joseph and I became closer at school. One of my best friends, Kathy, felt very angry about that. Kathy and her friends sang a song to insult me and posted on the Internet to vent her anger. Kathy attacked me on my Facebook message board, and criticised me as "Hau Jiao" (bitch). I felt very sad about her action. I was very angry and wrote some insulting messages to humiliate her in response. Then, both of us said many bad words on Facebook to attack and hurt each other openly. After three months, we stopped our communication with each other at school and in the virtual world." (Mary, August 2015)*

Mary felt unhappy about the teasing in the cyberworld, but she felt worse because the perpetrator was one of her best friends. She did not know how to solve the conflict. Mary's fight back and flaming communication further made the conflict irreconcilable. This seems to be

consistent with König et al. (2010) study, which found revenge is one of the motives in cyberbullying. Moreover, peer conflict often becomes more serious in the cyberworld as more people get involved; and peers can be cyberbullying perpetrators, which has been revealed since the first study of cyberbullying (Finkelhor et al., 2000; Hawker & Boulton, 2000; Hong & Espelage, 2012; van Geel et al., 2014).

Impacts of the Cyberbullying Incident

The impacts of the incident were not limited to psychological and emotional aspects. Mary's social life and personal functioning were affected. The following was Mary's description on her feelings and the consequences after the cyberbullying:

> *"After that, I was excluded from my peers. This made me more unhappy. I did not know how to handle the situation, the only thing I could do was escape. Then, I started to skip school for up to two weeks to hide myself. I did not tell anyone the reason for my skipping school." (Mary, August 2015)*

In the conflict, Mary felt sad and lost her best friend and peer group in school. This had a great impact on her ecological system. She did not seek help from school or her family; and her peer system was dysfunctional due to the conflict. None of the Microsystems were providing support in Mary's ecological environment at that time. As reflected in Mary's quote, when she was retelling this part of the story, it seemed that the loss of friendship and peers was a bitter pill to swallow for her (Bronfenbrenner, 2009; Maslow, 1943). It was a difficult time for Mary. This were observed in Mary's dialogue and facial expressions in telling us the impacts of the incident.

> *"Although I want to escape from the environment by skipping school, the conflict was not stopped as I expected. One day, I met one of my friends for lunch outside school. Kathy and her friends stopped me on the street corner. She was very angry and asked for the reason for my acts on social media in the last few months. I felt that she wanted to hit me at that time." (Mary, August 2015)*

Although Mary tried to escape from the conflict and hide in her home, because of the nature of the Internet, the conflict and insulting messages still existed on the social media platform, which caused continuous harm to the people involved in conflict. Mary's feelings of powerlessness and inability to escape from the conflict are consistent with Dooley et al. (2009) study on the characteristics of cyberbullying.

> *"Some of my classmates reported my accidental street-corner meeting with Kathy to school. It drew attention from the school teachers. On the other hand, my skipping school aroused my parents' concern about my school life. I told my parents the whole story." (Mary, August 2015)*
>
> *"Then, my mother, school teacher and school social worker had a joint meeting about my skipping school and the incident at the end of the school year. They proposed a solution after the meeting: either Kathy and her friends or I need to stay in secondary four for another year to stop the conflict. Finally, my mother agreed I needed to repeat a year in school, although I was not*

willing. I felt it was unfair as the punishment was just given to me only." (Mary, August 2015)

"I feel sad when I recall the conflict. I tried to hide myself but I was unsuccessful. In the end, my mother found something was wrong and helped me to overcome the crisis. I am grateful for her support in this incident." (Mary, August 2015)

Mary's experiences showed that the cyberworld is the extension of her life in the physical world. Her actions in the virtual world were interconnected with her daily life. There are similarities between Mary's case and the finding expressed by Beran and Li (2008) that cyberbullying is interconnected with school bullying. However, neither her parents nor the school were sensitive to the cyberworld conflict until the conflict surfaced in the physical world.

Fortunately, Mary just hid herself at home and her mother could spot the incident and work with the school in time. Although Mary did not agree with the way the conflict was settled, the family support protected her from further escalation of the conflict. Bronfenbrenner (2009) suggests positive interaction between Microsystems can support the development of young people. Mary's good relationship with her mother enabled her mother to offer help to her in time. Moreover, Mary's mother's active involvement and cooperation with the school provided a possible way out and minimised the harm to her daughter.

Story 2: Doing the Right Thing

Yin's Ecological Environment

Yin is a thin 15 year old boy with short hair. He studies at a local secondary school. Yin lives with his parents in government public housing for lower income groups. He thinks his relationship with his parents is average. He has good computer skills but is not confident in his physical strength. He loves Internet games very much and always plays computer game with friends at the Internet café until midnight. The service for Young Night Drifters (YND) social worker encountered Yin in the public housing playground at midnight one year ago. YND is a government-supported service to support young night drifters in Hong Kong, and social workers reach out in the community from 10:00pm until 6:00am (Hong Kong, 2017). Yin, the YND social worker and the researcher conducted the interview at the YND office. The social worker reserved an activity room for the interview. The room faces the sea, with many big windows providing a spacious and comfortable environment for the interview.

Significant Cyberbullying Incident

Yin recalled his interaction in the cyberworld with one of his friends after leaving school. He said:

> *"This was an incident related to money affairs with my friends. After I left my previous school, I usually got along with my friends in the community. One of my friends "Keung", usually borrowed money among our peers, but he never paid the debts. I lent $4,000 to him, then he did not show up for two*

> *months. When I urged him to pay the debt, Keung did not reply at all. We messaged Keung privately by WhatsApp and other means several times to remind him to pay the debt. Even when we scolded him publicly on Facebook, he did not show up to pay us. Keung usually behaves in that way; we will keep harassing him until he cannot stand the harassment and returns the money to us. I do not find any problem on our action, we are doing the right thing to protect our own interests." (Yin, August 2015)*

Yin described the background and reason of his action in great detail. He did not think his behaviour was cyberbullying. However, the motive of Yin's behaviour matches Olweus (1994) and Smith et al. (2008) views on cyberbullying as repeated, intentional aggressive behaviour to hurt the target via the Internet. In contrast, Yin believed that he was doing the right thing. In Yin's point of view, he was the victim of the incident, as he could not get his money back on time. This is consistent with boyd (2014) observation that when we look at cyberbullying incidents through the eyes of young people we find it is much more complex than we imagined and that we might need to question our own assumptions.

Yin justified his actions to publicise Keung's personal information and behaviour in the cyberworld to protect potential victims. He described his actions as follows:

> *"We posted Keung's photo on Facebook and other social media to tag him as a debtor of many of us. We mobilised a lot of people to scold him in the Facebook, more than 200 curses on him within one hour. Keung ignored our request. Then, we raised the action level by posting Keung's behaviour on one*

> *of the popular Internet discussion forums, "Hong Kong Golden Forum". With the help from the hackers in the forum, we dug out Keung's personal information such as his full name, phone number, home address to post openly in the forum. Although we did not make use of the information for further action on Keung, we know that many people made fun of him by using the personal information." (Yin, August 2015)*

Yin explained his aggressive action and the steps he carried out in detail. This shows that he was very familiar with various social media and Internet platforms for performing aggressive actions. Although Yin was aware of the consequences of his action to post Keung's personal details on the Internet, he still decided to create trouble for his target. It was a well-planned attack with technical support and the mobilisation of others to create social pressure on the target. In this case, Yin reached out to the organisation outside his immediate Microsystem by utilising his own computer knowledge. The technology enabled Yin to mobilise more people outside his personal social network. This corroborates the ideas of Johnson (2010) that the technology subsystem has already had an influence on young people. Yin acted as a perpetrator in this incident, and he was cheated out of $4,000 simultaneously. Consequently, he considered himself to be the victim and justified his aggressive action.

Story 3: My Bitter Journey

Ken's Ecological Environment

Ken is a 16 year old boy. Ken lives with his father and grandmother. Ken's mother left them when he was a young child. The family relationship was very tense because of the strict parenting of Ken's father. Ken was a detached student and did not have good grades in school. He suffered from bullying and cyberbullying for almost four years before he decided to leave school. Then, he hung around in the community for a year. Later, Yin joined an alternative education project called "Unusual Academy" organised by a Hong Kong NGO. Yin was invited by the project social worker to share his experiences. The interview was conducted in a classroom at the alternative education project training centre, a place where Ken feels comfortable.

Significant Cyberbullying Incident

Ken was one of the victims, and witnessed several different forms of bullying and cyberbullying among his classmates. He said:

> *"When I was promoted to secondary school, I did not get along with the other students and was excluded. At the beginning, only a few classmates were involved, but later more and more joined in bullying me. They called me names and denigrated me in school. One day in an assembly, they were impersonating my name to do some embarrassing and stupid behaviour in front of hundreds of students. Although the teacher knew that they were pretending to be me, they did nothing on this matter. I guess the teachers may*

have thought that it was just funny joking between students." (Ken, October 2015)

Ken left his familiar peer group and teachers in primary school, and needed to adapt to a new peer and school system in his ecological environment. The problematic peer interactions between Ken and his classmates resulted in some school bullying experiences. Transition to secondary school is a critical period for an adolescent, and adjustment to the new peer and teacher relationships may hinder their adaptation to the new school life (Nansel, Haynie, & Simonsmorton, 2003). Other than the bullying, the teacher's indifferent attitude may have made Ken feel further disappointed in his school.

Transition from School Bullying to Cyberbullying

The school bullying Ken experienced was extended into cyberbullying because of the popularity of social media among his peer group. He discussed how cyberbullying became commonplace in his class when Facebook became popular with his classmates. He said:

"In secondary two, the bullying further extended into the cyberworld. Facebook became popular among our classmates at that time. Because of the popularity of the Internet and social media, almost every student in my school had a Facebook account. We added everyone as a friend. At the same time, the bullying at my school gradually developed into cyberbullying. The bully posted bad words on another student's Facebook. The bully started to denigrate their target victim and open up their full name and personal

information. Usually, the denigration started from a trivial matter about the victim and developed into something seeming to be serious with some fictional plot posted by the bully." (Ken, October 2015)

Ken illustrated the transition from school bullying to cyberbullying in detail. He described the cyberbullying as an extension of school bullying among his classmates. This also accords with Juvonen and Gross (2008) finding that there is an overlap between cyberbullying and school bullying. The importance of young people's peer interactions in the cyberworld is increasing with the popularity of social media. The Internet becomes another social interaction platform for young people without time and space constraints. The technology subsystem is like a double-edged sword: it can empower young people to reach out through the system outside their immediate environment, but on the other hand, it can strengthen the harm and impacts of cyberbullying (Johnson, 2010).

Witnessing Cyberbullying Behaviour

Ken was only one of the victims of cyberbullying in his school. He described other cyberbullying happening among his classmates:

"The bully can download the target's photo to open a Facebook account on behalf of the victim. The bully used the fake account to pretend to be the victim to do many awkward actions to humiliate or embarrass the victim." (Ken, October 2015)

"Sometimes, the bully opened a group on Facebook and invited most of the classmates into the group, except the targeted victim. They made fun

and laughed at the victim. Usually, the bullying in school and cyberbullying happened at the same time." (Ken, October 2015)

"Another bullying case I witnessed in my school: the bullies hit, punched and kicked the victim and forced the victim to pretend to be enjoying the process very much. Then, they took video and uploaded it to the Internet to humiliate the victim." (Ken, October 2015)

Ken further described cyberbullying cases he witnessed at his school, where the victims were Ken's classmates. Consistent with the literature, Ken described ways to perform denigration, impersonation, exclusion and happy slapping among his peers in the cyberworld (Limber, 2012; Willard, 2007). Ken's experience reflected the fact that school bullying in secondary one was added into the cyberworld via social media in the second year. The cyberbullying supplemented the bullying in school at the same time. The development process shows that the importance of the technology subsystem is increasing with the popularity of social media.

Impacts of the Cyberbullying Incident

Ken tried different ways to respond to the lengthy school bullying and cyberbullying, but he could not stop the bullying. He described his feeling of helplessness in the interview:

"I tried to resist the bully on social media, but I was subjected to more intense bullying in the end. I reported the incident to a teacher, but the teacher did not punish the bullies as they had good academic performances in my class. The teacher just reminded them not to do it again."

> *"The school and teacher's attitudes left me feeling very helpless at that time. Even the school social worker just told me to report it to the class teacher only, they won't handle issues happening on the Internet."*
>
> *"Then, I tried to pretend I was sick and stay at home to escape from the bullies. But my father insisted on sending me to school in any case. Finally, I told him about my bitter experience at school. I am glad that he supported me very much. Then, I enrolled at the Unusual Academy and moved to a new community to stay away from the bullies."*
>
> *"I felt the virtual attack was more serious than physical bullying. The body can recover when time passes. However, the insulting words caused long-lasting psychological hurt. It is hard to recover for me. The experience of bullying and cyberbullying in the past few years hurt me very much, I cannot trust others after the incident." (Ken, October 2015)*

Ken felt disappointed and helpless when he reported to the class teacher and the school did nothing to stop the bullying. Although Ken felt very sad about his experience, he could only escaped from the bullies when his parent transferred him into a new school. This shows the importance of family support in helping young people to overcome bullying incidents. Moreover, Ken expressed that the bullying changed his attitude towards others: he cannot trust and share his own information in the cyberworld easily. Ken's expressions are in keeping with previous observations that cyberbullying raises more concerns about privacy, trust, and identity – both online and offline (Bauman, 2010; Hinduja & Patchin, 2008).

Story 4: A Flaming Relationship

Zurg's Ecological Environment

Zurg is a 15 year old boy. He came across as a very talkative and emotional student. He lives with his father and mother in Hong Kong. Zurg's mother cares about him very much, but Zurg thinks his relationship with his mother is poor. He yawned at his mother when she phoned him during the interview. He left school after secondary two. Then, Zurg was referred from the Education Bureau to join the alternative education project. Zurg has a good relationship with the project social worker. He accused his classmates who targeted him as a common enemy in the alternative education class.

The interview was conducted in a classroom at the alternative education project training centre in the city centre. The room was reserved for the interview after the daily training programme. The student chairs in the room were rearranged as a circle to facilitate sharing in the interview. Zurg was very familiar with the setting, as he had come to the centre to receive training in the last few months.

Significant Cyberbullying Incident

Zurg described himself as a victim in the incident. He thought that there was no problem about flaming relationships, as everyone was doing the same things on the Internet and they only targeted him in this matter. He said:

"When I enrolled in the alternative education course, my classmates opened a WhatsApp group and invited me to join. This was a sharing group

> *for students only. On the first day of the course, we had some conflict in class. Then, I quarrelled with them after school. Then, I posted a threatening message in the WhatsApp group, and told them I would find someone to rape them. Another day, I sang a song to tease my classmates and uploaded it into the WhatsApp group for fun. After that, they grouped together to boycott me and targeted me as their common enemy." (Zurg, October 2015)*

In Zurg's description, the conflict was extended into the cyberworld. It was a continuation of the struggle between Zurg and his classmates. Zurg's flaming communication resulted in revenge from other classmates to boycott him and counteract his aggressive messages. This is in agreement with König et al. (2010) and Holfeld, Grabe, Li, Cross, and Smith (2012) observation that revenge is a key motive in cyberbullying.

Impacts of the Cyberbullying Incident

Zurg's experience is a typical flaming relationship identified among young people in the cyberworld (Willard, 2007). The conflict affected Zurg's peer relationship with the whole class. He said:

> *"The incident made me felt sad and furious. I tried to leave the WhatsApp group several times, but they added me to the group again. They would celebrate and cheer if they could make me angry and lose my temper with their irritating words. Finally, our social worker intervened and stopped the conflict." (Zurg, October 2015)*

Although the conflict was stopped at an early stage without causing more harmful impacts on the group, the incident Zurg left out in the cold among the class in the whole alternative education training centre. He did not have any friendship and peer support during that period. Zurg's role in the incident is very complex. Zurg started the conflict in the cyberworld, but he also suffered greatly from the classmates' fight back and boycott, which made him more angry. He was the perpetrator and the victim in the incident.

Story 5: An Exciting Outing in the Cyberworld

Raymond's Ecological Environment

Raymond is an 18 year old boy. He is familiar with social media and different advanced computer skills. Raymond lives with his parents and older brother. The family relationship is bad as they are always quarrelling about how to parent Raymond. He left school after secondary two and stayed with his friends in the community for two years. Then, he came back to school for another two years until secondary four. He left the school again in the first semester of secondary four because of conflict at school. Raymond came to the social worker's office to prepare for the admission tests for a placement in a local school. The interview was conducted in the office interview room before the admission test preparation.

Significant Cyberbullying Incident

Raymond shared one of his most unforgettable memories in the cyberworld. Raymond and his friend disclosed the personal information of a man for his misbehaviour in a discussion forum. Raymond and his friends found it a funny experience in the cyberworld. Although Raymond knew that his behaviour may cause trouble for the man, he did it and did not feel guilty. He said:

> *"One of my most unforgettable experiences was an incident in an online discussion forum. My online friends and I were active users of the discussion forum; we usually teased people who posted stupid messages for fun."*

> *"One day, we found a man posted a message asking for a girl to be his sexual partner. The post had a photo of his penis attached. The guy described himself as handsome and strong and always the star among girls."*
>
> *"My friends and I found this very interesting. We started teasing him and forwarding the messages and the photo to some websites and social media. We kept the message on the forum's hot list and displayed in the top line by continuously commenting on the message. We did it repeatedly to spread the message as much as possible. Some of us organised the messages, photo, replies and comment in chronological order like a documentary, helping newcomers to understand the whole story more easily." (Raymond, November 2015)*

Raymond and his friends' behaviour showed an important characteristic of cyberbullying. Once the message was posted on the Internet, it could be easily copied, stored and forwarded by anyone interested in the post. Even the message writer cannot delete and remove messages from the cyberworld. The spread and impacts of the messages cannot be controlled (Grigg, 2010).

> *"Then, we searched for, and found, the guy's personal data, including mobile phone number, home address, school and the name of his girlfriend. We posted that information with the original message to let more people know the true face of the guy. I did not think my action was inappropriate. I believe that I did a good thing for society, the guy should bear the result of his own*

misbehaviour. I felt happy and excited during this incident, and I will do it again if necessary." (Raymond, November 2015)

Raymond did not know the victim, but he believed that disclosing the victim's personal information could create more trouble for him. The linkage between reality and the cyberworld brings the impact of cyberbullying on the life of the victim. This finding matches observations in the earlier literature, with outing being one of the most common cyberbullying behaviours observed among young people (Willard, 2007). Moreover, Raymond felt happy and excited during the incident: there is more discussion on this observation in the cross-case analysis. Finally, Raymond commented that the victim should bear his own responsibility for the incident. This is consistent with Weber, Ziegele, and Schnauber (2013) finding that people tend to attribute more responsibility when the cyberbullying victim has presented themselves as being very open and extraverted with their personal information.

Cross-case Analysis

Each case in this study was unique in its nature. In order to gain a comprehensive view of cyberbullying, cross-case analysis was adopted to understand the nature of cyberbullying and its impact on young people (Yin, 2013). Bronfenbrenner's (2009) ecological system theory provided a reference for the researcher to identify the potential themes in the initial coding. The interview data were coded according to pattern-matching suggested from the ecological framework and literature (Yin, 2013). The matching was recorded in NVivo 10 as a reference for formulating a comprehensive statement list (Appendix 7: Phase One NVivo).

Then, the researcher grouped the themes into three main themes: cyberbullying behaviours, nature of cyberbullying and impacts of cyberbullying. A total of 348 significant statements were identified from the five cases, coded into 13 themes and organised into three main themes as seen in *Table 4*. Some codes were discarded due to their irrelevance to the research questions during the data analysis process.

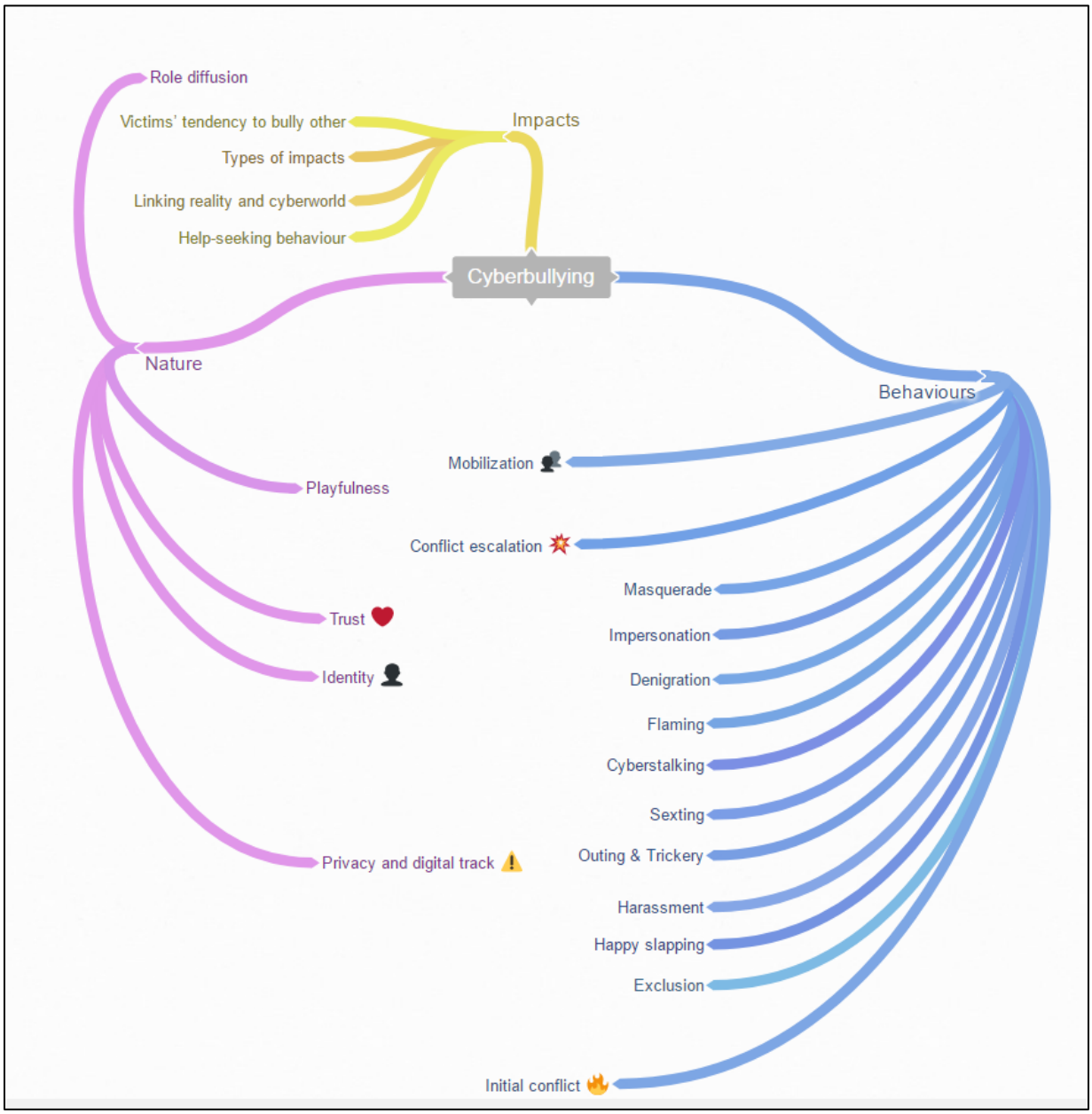
Table 4 *Main Themes and themes*

Main Theme	No	*Theme*
Cyberbullying behaviours	1	Behaviours
	2	Initial conflict
	3	Conflict escalation
	4	Mobilisation
Nature of cyberbullying	5	Role diffusion
	6	Privacy and digital track
	7	Trust
	8	Identity
	9	Playfulness
Impacts of cyberbullying	10	Linking reality and cyberworld
	11	Types of impacts
	12	Change of young people
	13	Help-seeking behaviour

Thematic Map

The thematic map showed the main themes and subthemes identified during the data analysis process (see Figure 6). Within this map, three main themes were illustrated in different colours, along with the subthemes. All the themes were illustrated with examples of coded text-segments extracted from the interviews.

Figure 6 *Cyberbullying thematic map*



Main Theme 1: Cyberbullying Stages and Behaviours

Cyberbullying is aggressive behaviour to hurt the victim in the cyberworld. This theme captured participants' statements on their response to dealing with harassment or bullying. As informed by the literature review and the list of cyberbullying behaviours mentioned in Chapter Two, the following behaviours were identified through the case interviews (Table 5).

Table 5 *Cyberbullying behaviour observed among the cases*

No	Cyberbullying behaviour	Observed in case
1	Harassment	Case 1,3,4,5
2	Outing & Trickery	Case 2,3,5
3	Denigration	Case 1,3,4
4	Impersonation	Case 3,5
5	Flaming	Case 1,3,4
6	Sexting	Case 5
7	Masquerade	Case 2,5
8	Happy slapping	Case 3
9	Cyberstalking	Case 4
10	Exclusion	Case 3
	`	

From the interviewees' experience of cyberbullying incidents, various types of cyberbullying behaviour were identified in the interviews and no new or emerging types of cyberbullying behaviours were identified. This indicates that the proposed cyberbullying behaviour list is valid and usable in this study. However, multiple cyberbullying behaviours were observed in the case development. Three stages were identified across the cases, namely Initial conflict, Conflict escalation, and Mobilisation.

Initial conflict (early stage)

The early stage of cyberbullying may result from trivial matters and conflict among peers. In Mary's case, she was insulted by her peer for her intimate relationship with a boy. Mary's response further developed and the conflict become irreconcilable. Zurg was isolated by his peers because of his hot online messages on the first day of his class.

> *"The conflict started from quarrelling in school ... after that they spread rumours and insulting messages on Facebook about my romance with a boy at the same school." (Mary, August 2015)*

Harassment, the sending of nasty, mean, and insulting messages repeatedly online to the victim, is the most referenced behaviour in this study (Hamburger et al., 2011; HKFYG, 2010; Kowalski et al., 2012). Flaming is another typical cyberbullying behaviour, which we define in this study as using bad language in online interaction; harassment and flaming are usually observed in the beginning stages of cyberbullying (Balakrishnan, 2015; Kowalski et al., 2012).

Conflict escalation

Cyberbullying incidents may originate from one behaviour and extend to multiple behaviours in the developmental process. All the participants revealed that cyberbullying incidents usually involved more than one type of cyberbullying behaviour (see Table 5). In addition, the interviewees reported an escalation of cyberbullying from the initial conflict to extensive cyberbullying behaviour. In Mary and Ken's cases, the cyberbullying was escalated to more serious harm when the victim tried to fight back.

> *"After the conflict in Facebook, I was excluded from my peer … They stopped me in the street corner.… I felt that she wanted to hit me at that time." (Mary, August 2015)*
>
> *"The cyberbullying started from a trick in the school assembly…. if the victim fights back on Facebook, they will suffer more serious bullying in school" (Ken, October 2015)*
>
> *"They [perpetrators] eventually turned into just wanting him to die [have more serious trouble] by opening up all the victim's personal information on the Internet" (Raymond, November 2015)*

In Raymond's case, harassment developed into more serious bullying affecting the daily life of the victim. These results are in accord with Pearce, Cross, Monks, Waters, and Falconer (2011) who indicate that cyberbullying incidents can be escalated quickly through the use of technology. Hoff and Mitchell (2009) also claim that the victim's reaction or avoidance is likely to escalate the cyberbullying situation further.

Mobilisation

Another observation from the cases is the mobilisation of others to enhance the impact of cyberbullying behaviours. Most of the perpetrators (Mary, Yin, Ken and Raymond's cases) involved others participating in the cyberbullying in the later phase of the incident. Mary's peer group were involved in the cyberbullying incident. Yin even extended his network to mobilise a

hacker group which was located outside his Microsystems. In Raymond's case, he made use of forums, blogs and strangers on the Internet to spread the victim's personal information.

> *"Then, we raised the action level …. We mobilised a lot of people to scold him on Facebook, more than 200 curses on him within one hour. … With help from the hackers in the forum, we dug out Keung's personal information such as full name, phone number, home address to post openly in the forum." (Yin, August 2015)*
>
> *"We started teasing him and forwarding the messages and the photo to some websites and social media. We did it repeatedly to spread the message as much as possible. Some of us organised the whole incident in chronological order like a documentary, helping newcomers to understand the whole story more easily and helping us to spread the message further." (Raymond, November 2015)*

The techno subsystem enabled the young people to mobilise people and resources outside their immediate Microsystem to accomplish their goal of making as much trouble for the victim as possible (Bronfenbrenner, 2009; Johnson, 2010). Willard (2007) also reports some boys created a "We Hate Joe" website to post untrue things or rumours about a targeted teenager. Mobilisation can further enhance the impacts of cyberbullying. In Raymond's case, the incident was well-organised to draw the attention of more people. In the mobilisation stage, the perpetrator may try to reframe or distort the incident to get more public support for their aggressive action.

> *"The denigration started from a trivial matter about the victim and developed into something that seemed to be serious with some fictional plot posted by the bully." (Ken, October 2015)*

In Ken's case, the untrue messages against the victim were further accumulated and distorted in the transmitting process, the rumour become more serious, growing like a snowball (Buckner, 1965). Denigration is defined here as posting untrue things or lies about someone online. It is another commonly observed cyberbullying behaviour in Hong Kong and elsewhere (HKFYG, 2010; Johnson, 2012; Kowalski et al., 2012). This observation is in line with Mann (2009) finding that denigration is a series of interconnected aggressive behaviours from a number of members of social networking websites.

Main Theme 2: Nature of Cyberbullying

Cyberbullying has a number of unique characteristics which were observed in the collected data. As informed by ecological system theory, the interaction between young people and their peer system is significant in affecting their development (Bronfenbrenner, 2009). Group participation was observed and related to some cyberbullying behaviour by nature such as exclusion, denigration and happy slapping in this study.

Privacy and digital tracking are another important characteristic of cyberbullying. The anonymity of cyberbullying suggested by some scholars (Bauman, 2010; Hinduja & Patchin, 2008) raises more related concern such as identity and trust in the cyberworld.

Moreover, playfulness may be another motive in cyberbullying rather than just wanting to hurt the victim, as was seen in the interview cases. A common view amongst interviewees was that young people's participation in cyberbullying is complicated. Their roles in, and ways of, participation are dynamic and changing all the time (boyd, 2014; Levy et al., 2012).

Privacy and digital tracking

Privacy and digital tracking are another theme identified. Outing and trickery violates the privacy and digital track of the victim. It is the second most referenced behaviour in this study. It is one of the major cyberbullying behaviours identified in previous studies (Athanasiades, Kamariotis, Psalti, Baldry, & Sorrentino, 2015; Papatraianou et al., 2014; von Marées & Petermann, 2012). Outing and trickery is defined as "posting or forwarding private information about someone on the Internet without his/her consent".

The participants' cyberbullying experience raised their concerns about their privacy and the digital traces left by their interactions in the cyberworld. Digital traces are the record or data of any online activities, actions and communications, and can identify the particular user or device in the cyberworld (Howison et al., 2011, p. 769; Wesler et al., 2008).

> *"I tried to do outing with help from the Golden Outing Group (an active network group stationed at Hong Kong Golden Forum) to dig out the information" (Yin, August 2015)*
>
> "*I have some experience in Outing, the victim's outing information mainly comes from their own posting on the Internet. Moreover, the victim's friends may post the information on social media without proper privacy settings. This information is open to search by anyone on the Internet." (Raymond, November 2015)*

The interview respondents expressed their concern about privacy and data protection. Raymond described one of the methods of doing Outing. High computing skills are not necessary to get personal information from the online accounts of victims: digital traces left on social media and other platforms can be searched by everyone if the target's social media account's privacy settings are not properly set up. Raymond stated that the main sources of personal information come from the carelessness of the victim or accidental leakage from their close friends. Moreover, Yin described that the perpetrators can seek help from local hackers to get the data if needed. In his cyberbullying case, the Golden Outing Group enabled Yin to have higher power in the cyberworld.

A local cultural study described the "Golden Outing Group" as a network community aimed at outing the personal data of targets as a means to punish perceived evil. The target has usually presented annoying messages or performed socially unacceptable behaviour: anyone can report the incident to the group, searching and opening up the target's information if the group members accept the target as 'evil' enough (XU, 2011, p. 7). Yin did not perceive his actions as the bullying of innocents; rather, he agreed with the stated values of the Golden Outing Group that such actions punish evil in the cyberworld. Their behaviour pattern is like a vigilante group that publish anyone they dislike. The technology subsystem empowers technologically skilful people to have higher power in their interactions with other people. Regulation from the legal system is required to protect the privacy and interests of the public.

Identity

Anonymity is a feature of cyberbullying that distinguishes it from bullying in the real world (Barlett, 2015). A bully can easily hide their real identity or pretend to be another person in the cyberworld. Therefore, impersonation is feasible and common in cyberbullying (König et al., 2010; Kowalski et al., 2012; Willard, 2007). Impersonation is defined here as pretending to be someone and posting or sending messages online to embarrass someone.

Exploring the nature of cyberbullying raises questions of identity. Young people's identity in the cyberworld is not as stable as in the real world. A typical cyberbullying behaviour is impersonation, covering up the perpetrator's identity by borrowing someone else's (Mann, 2009; Willard, 2007). One of the interviewees, Ken witnessed impersonation among his classmates on Facebook, so he explained how to do it during the interview.

> *"The bully can download the target's photo to open a Facebook account on behalf of the victim. The bully used the fake account to pretend to be the victim to do many awkward actions to humiliate or embarrass the victim." (Ken, October 2015)*

Ken described that anyone can use the target's photo and name to apply for an account on social media. Then, the perpetrator can post any message with the target name. It is difficult to verify the identity of the person. In fact, most social media and Internet services do not include identity verification during the account application process; only an email address and password are required for account registration (Facebook, 2016; Instagram, 2016). The perpetrators can easily cover up their identity and pretend to be the victim to embarrass them.

Playfulness

Playfulness has been identified as one of the motives behind cyberbullying incidents (HKFYG, 2010). In our definition of cyberbullying (see Chapter Two), it is aimed at hurting other. However, four out of the five interviewees mentioned playfulness as one of the motives for cyberbullying.

While, some cyberbullying was the continuation of traditional bullying such as Ken's case, in Ken and Raymond's cases, the perpetrator performed harassment and flaming for fun.

> *"They opened a group in social media to tease the victim for fun, but excluded the victim from the group. … Then the group gradually transformed into a place full of boycott and scolding." (Ken, October 2015)*

> *"My friends and I found this very interesting. We started teasing him and forwarding the messages and the photo to some websites and social media." (Raymond, November 2015)*
>
> *"It is playful and funny." (Raymond, November 2015)*

As stated in Ken and Raymond's cases, the motive of perpetrator was looking for fun, but their behaviour hurt the victim. In contrast to earlier definitions of cyberbullying, some of the perpetrators performed cyberbullying behaviour for fun instead of to hurt the victim (Kowalski et al., 2014; Olweus, 2013).

> *"They [the perpetrators] opened an online group, teasing the target victim for fun….laugh at any shortcomings of the target victim" (Ken, October 2015)*
>
> *"Another day, I sang a song to tease my classmates and uploaded it into the WhatsApp group for fun." (Zurg, October 2015)*
>
> *"My friends and I found this very interesting. We started teasing him and forwarding the messages and the photo to some websites and social media." (Raymond, November 2015)*

This indicates that young people may tease the target for fun, without realising or seeming to care about the impact of their actions. This observation is consistent with a study on Australian students, which reported that most of the perpetrators did not think their bullying had an impact on their victims (Campbell et al., 2013). Moreover, as mentioned in the literature review, the perpetrator cannot assess the impact of their aggressive behaviour on the victim instantly. They

feel less empathy and remorse for their cyberbullying behaviour (Slonje, Smith, & Frisén, 2013; Sourander et al., 2010). The remote and detached environment may allow the perpetrator to underestimate their hurt of the victim, and just focus on the fun they experienced.

Role diffusion

A number of interviewees revealed that they had multiple roles in cyberbullying. Role diffusion was observed in the interviews. A victim in one cyberbullying incident may be the perpetrator in another incident.

"He just emphasised others' bad words about him, and ignored his verbal harassment of other classmates." (Zurg's social worker, October 2015)

"I am the victim, because they irritated me." (Zurg, October 2015)

It is difficult to clearly define Zurg's role in his cyberbullying experience as victim or perpetrator: he harassed his classmates while being excluded and teased by them at the same time. This indicates that it may sometimes be difficult to define the role of players in cyberbullying, as everyone may suffer because of the incident.

"I was the victim before. I can bully others now. I feel better." (Ken, October 2015)

Ken was presented as the victim in a cyberbullying incident, but he admitted that he would do the same thing as a perpetrator to another person he dislikes. This indicated that Ken plays

different roles in cyberbullying incidents. This finding supports evidence from previous observations that young people being victimised in cyberbullying may contribute to aggression towards others (H. J. Johnson, 2012; Levy et al., 2012).

Main Theme 3: Impacts of Cyberbullying

Cyberbullying has attracted public concern for its impacts on young people. Four themes including “linking reality and the cyberworld”, “types of impacts”, “changes in young people”, and “help-seeking behaviour”, emerged from the data and are grouped under the impacts of cyberbullying.

Linking reality and the cyberworld

Bronfenbrenner (2009) suggests the Microsystems are interrelated and influence the development of young people. The links between the cyberworld and reality in cyberbullying incidents were explored in this study.

Internet platforms have become one of the key means of communication between peers and classmates. The new means of communication and social media are affecting young people’s interaction significantly. Young people spent more time communicating with their friends in the cyberworld (O'Keeffe & Clarke-Pearson, 2011). Most of the participants described how their cyberbullying experiences were interwoven with their peers in reality.

Real-life conflicts will extend into the cyberworld, as described in Mary, Ken and Zurg’s cases. Mary’s conflicts with her peers on Facebook were further developed in reality and affected her school life. She said:

> *“After that, I was excluded from my peers. This made me more unhappy… Then, I started to skip school for up to two weeks to hide myself…. Kathy and her friends stopped me on the street corner…. I felt that she wanted*

to hit me at that time … Finally, my mother agreed I needed to repeat a year in school." (Mary, August 2015)

Moreover, fights and actions in the cyberworld will bring further consequences in reality: Mary's reaction in the cyberworld was followed by attacks and fights in the community. Finally, the dispute in the cyberworld affected her emotions and caused her to skip school, which led to her repeating a school year. These findings are consistent with previous studies that suggest that cyberbullying is usually interconnected with school bullying (Beran & Li, 2008; Juvonen & Gross, 2008). In Ken's case, school bullying transformed into harassment on social media. Denigration, impersonation, exclusion and happy slapping were reported as part of the incident. He said:

"Usually, the bullying in school and cyberbullying are happened at the same time … I tried to resist the bully on social media, but was subjected to more intense bullying in the end. …. Then, I tried to pretend I was sick and stay at home to escape from the bullies." (Ken, October 2015)

In Ken's experience, if the victim fight back in the cyberworld, it results in more revenge, which further supports the interconnectedness of cyberbullying and real-world experiences. This finding is in line with König's suggestions that revenge and retaliations in cyberworld are the key motives for engaging in cyberbullying (König et al., 2010). However, König fails to acknowledge the complex nature of cyberbullying, which is motivated by many other factors, too, for instance playfulness and release of anger, as mentioned in Raymond and Zurg's cases.

The findings in this study clearly demonstrate that the cyberworld is not a virtual environment independent of the life of young people. The cyberworld is one of their social environments, a gathering place of this generation, like the playground, basketball court or public area. It is part of their life, no matter whether incidents occur in the cyberworld or reality. However, the linkage seems to be underestimated by adults. Ken reported the cyberbullying incident to a teacher but without a serious response. As no one was physically hurt in school, Ken's teacher and school social worker did not take further action and just commented, "it is not a big problem". Ken said:

> *"Although the teacher knew that they were pretending to be me, they did nothing on this matter. I guess the teachers may think that it was just funny joking between students… I reported the incident to a teacher, but the teacher did not punish the bullies as they had good academic performances in my class. The teacher just reminded them not to do it again … The school and teacher's attitudes let me felt very helpless at that time. Even the school social worker just told me to report it to the class teacher only, they won't handle issues happening on the Internet." (Ken, October 2015)*

Ken's teacher told Ken that the problem was solved as they reminded the perpetrators to stop the behaviour. However, it did not stop the cyberbullying in Ken's case. This finding is consistent with that of Notar and Padgett (2013), who suggest that teachers and parents might underestimate the impacts of aggressive behaviour in the cyberworld and the linkage between real and digital lives for young people.

Types of impact

From the data of this study, the impacts of cyberbullying incidents included emotional disturbances, physical hurt and affecting the school life of young people. In Mary's case, her school teacher suggested that she repeat a year of school to escape from the perpetrators. Ken left his school and moved to another community to keep away from the perpetrator.

Psychologically, most of the interviewees (Mary, Ken and Zurg) felt unhappy during and after their cyberbullying incidents. Ken further emphasised the importance of psychological hurt in cyberbullying:

> *"I felt the virtual attack was more serious than physical bullying. The body can recover when time passes. However, the insulting words caused long-lasting psychological hurt. It is hard to recover for me." (Ken, October 2015)*

As the peer system is a significant Microsystem in the ecological environment of young people's development, the cyberbullying affects the peer system heavily (Bronfenbrenner, 2009). In Mary, Ken and Zurg's cases, they were excluded from their peers. The positive interaction and emotional support from the peer Microsystem is limited. The young people's needs for belonging, love and affection cannot be satisfied (Baumeister & Leary, 1995; Maslow, 1943). Mary's unhappiness was so intense that she was unwilling to go to school after the cyberbullying incident. These findings support previous research that suggests that cyberbullying causes substantial emotional distress (Kowalski et al., 2012; Willard, 2007). This reveals the importance of psychological impacts in cyberbullying and the need for further investigation in Phase Two of this

study. However, these results are based upon interview data taking place after a time lag of from three months to five years after the actual cyberbullying incident, and it is unclear whether the emotional status truly reflected the participants' situations in the cyberbullying process.

Victims' tendency to bully others

This is a theme related to the behaviour change of young people involved in cyberbullying. As indicated in the interviews, cyberbullying changed the behaviour patterns of victims. One of the respondents, Ken, said:

> *"After the incident, I felt that if you don't behave strongly and bully other, you will be the victim. Now, I can do the same thing as the perpetrator to attack and hurt those people I don't like …. I was the victim before, I can bully others now, I feel better." (Ken, October 2015)*

The victims' views and behaviours became more aggressive after cyberbullying incidents. Ken's experience and observation in the cyberbullying incidents equipped him with knowledge of how to carry out cyberbullying himself, such as replicating the impersonation and exclusion he had suffered in the cyberbullying incident. Ken's feeling better may be due to him having learned the tricks to bully others; this enhanced his power to be more confident by using the weapon to protect himself in the cyberworld. As regards the definition of cyberbullying in this study, the power difference between Ken and perpetrator was lessened. On the other hand, Ken's higher power may induce his aggressive behaviour towards others. These results also agree with the findings of Balakrishnan (2015) that there are tendencies for cyberbullying victims to become

perpetrators. It seems possible that a victim of cyberbullying may take revenge through bullying other people for their miserable experience, as mentioned in a previous study (König et al., 2010). However, this observation is only confined to individual cases in this study; it is difficult to tell the general tendency of behaviour change in the cyberbullying experience.

Help-seeking behaviour

Different responses and help-seeking behaviour were examined in this study. School was one of the most mentioned Microsystems in the interviews. School teachers and personnel played a significant role in the cases of Mary, Ken and Zurg. Mary's conflict was stopped by the intervention of school teachers; Mary was advised to repeat a school year because of skipping school and to enable her to avoid the perpetrators. In contrast, the school teachers' indifferent attitude made Ken felt powerless. Ken said:

> *"It is no use reporting cyberbullying to school teachers. I reported the incident to the class teacher … The teacher just reminded them not to do it again. The teacher did not punish the bullies as they had good academic performances in my class … I think my teacher tolerates cyberbullying as it is not happening in school, and they don't take it seriously." (Ken, October 2015)*

Zurg's case was better handled, with the early intervention of a social worker. All these findings are in agreement with Rodkin and Gest (2011) that teachers and other adults, including parents, social workers and other school personnel, play a critical role in the school Microsystem. They can act as a bridging agent to other systems influencing young people's development

(Bronfenbrenner, 2009). The positive interaction between school, peers and family can foster a more caring environment for young people which is proactive, and early identification of cyberbullying can minimise the level of conflict and harm for the victim. However, some adults tend to downplay the importance of cyberbullying. In Mary's case, the school teacher and parent's awareness of the incident was not sensitive enough to identify the issue in the early stages.

> *"Then, I started to skip school for up to two weeks to hide myself. I did not tell anyone the reason for my skipping school …. Some of my classmates reported my accidental street-corner meeting with Kathy to school. It drew attention from the school teachers." (Mary, August 2015)*

In Ken's case, even when the incident was reported to a teacher, no proper follow-up action was performed to tackle the issue. As mentioned in the previous paragraphs, teachers' and parents' awareness of cyberbullying is limited and tends to underestimate the severity of the cyberbullying incident (Cross et al., 2015; Notar & Padgett, 2013). Another study on rural schools suggests that teachers are concerned about cyberbullying in their school, but lack skill to identify and manage cyberbullying incidents (Beringer, 2011). This evidence demonstrates the need for better support for teachers and parents in cyberbullying prevention and identification.

> *"I reported the incident to my class teacher many times. However, the teacher did not take it seriously." (Ken, October 2015)*

Another significant Microsystem, the family, plays an important role in helping the victim recover from the hurt of cyberbullying. Mary chose to skip school to avoid the incident, until her family and school noticed Mary's change.

> *"My skipping school aroused my parents' concern about my school life. I told my parents the whole story … Then, my mother, my school teacher and school social worker had a joint meeting on my skipping school and the incident at the end of the school year." (Mary, August 2015)*

Mary's family started to work with the school to handle the situation. Finally, they compromised by suggesting Mary repeated a school year to avoid further conflict. Ken's lengthy experiences of cyberbullying and school bullying were terminated by changing school and moving to another district with his family. He commented on his appreciation of his family's support and understanding in helping him pass through the painful experience. This finding broadly supports the work of Hinduja and Patchin (2010a) that family support is a strong protective factor against self-harm in cyberbullying and bullying incidents.

> *"The experience of bullying and cyberbullying in the past few years hurt me very much… I tried to pretend I was sick and stay at home to escape from the bullies. But my father insisted on sending me to school in any case. Finally, I told him my bitter experience in school. I am glad that he supported me very much. Then, I enrolled into the Unusual Academy and moved to a new community to stay away from the bullies." (Ken, October 2015)*

Both Mary and Ken's family showed concern and support about their cyberbullying incidents. Although Ken said that his relationship with his father is very tense because of the strict rules in his family, his father loves him very much. Once the family knew about the cyberbullying incident, their parents worked actively with the school teachers to find possible solutions. This indicates that a good parent-child relationship supports the victim in seeking help in cyberbullying incidents. These findings are consistent with Bronfenbrenner (1986) suggestions of the family's role in fostering the healthy development of young people. In addition, these findings further support the idea of Espelage (2014) that family can provide support and buffer the impact of bullying.

Implications for this Study

The Phase One findings showed that the cyberbullying behaviours listed in the previous studies were observable and valid (Kowalski et al., 2014; Willard, 2007). The cyberbullying behaviours identified were formulated into an operational behaviour checklist for cyberbullying prevalence rate measurement. On the other hand, the checklist can be used to form a scale to measure the intensity of cyberbullying for individual young people.

Moreover, the researcher synthesised the emergent themes and the identified cyberbullying behaviour in the study. It was found that some of the themes were more closely correlated with some specific cyberbullying behaviour. As showed in the thematic map in Figure 6, for instance, cyberbullying may originate from playfulness to give some initial conflict such as a flaming communication, or making fun of others using masquerade. If the victim fights back the conflict may escalate to a higher level with more aggressive behaviour such as denigration, harassment,

outing, exclusion or happy slapping. In the latter stage, more people will be mobilised to amplify the impacts of the aggressive behaviour. Each of the cyberbullying behaviours is quite different, so it is difficult to identify a sequence or behaviour pattern. However, the development of cyberbullying can be classified into three stages of initial conflict, conflict escalation and mobilisation. This is an important finding to inform the cyberbullying prevention and intervention in the discussion chapter.

In addition, young people's identity and trust on others may be affected by behaviour such as impersonation, denigration and masquerade. These behaviours may induce confusion and worries about the authenticity of information on the Internet. This also raised another concern on privacy and digital tracking. Outing, sexting, and cyberstalking victim may suffer from information leakage. Furthermore, it is the nature of some cyberbullying behaviour, such as exclusion, happy slapping, and denigration, to be usually performed by a number of perpetrators. Role diffusion in cyberbullying was identified in the interviews: the victim may take revenge on the perpetrator or another victim. This also accords with another study claiming that revenge is a reason for cyberbullying (You & Lim, 2016). Moreover, the cyberbullying victim may be transformed into a perpetrator after the cyberbullying incident because of an increase in power.

One of the most significant findings from Phase One was the complicated roles of cyberbullying participants. The roles change along with the experience of cyberbullying. These results suggest a strong connection between victim and perpetrator. This is an important issue for further examining the correlation between the two roles using quantitative methods in the second phase of this study. Moreover, the themes identified in this phase can be used as important information to facilitate a comprehensive discussion in Chapter Six. Taken together, the Phase One findings help us to understand more about the nature of cyberbullying among local young people.

Conclusion

In short, three main themes of the stages and behaviours, nature, and impacts of cyberbullying have been revealed in this study, which provided in-depth information about local cyberbullying. The findings showed that all the ten types of selected cyberbullying behaviour were identified in local settings. This can be adopted to formulate a behaviour checklist for measuring the cyberbullying prevalence rate among Chinese young people. Moreover, escalation of cyberbullying was found during this study. Cyberbullying behaviour did not happen in isolation: multiple behaviours were observed in the cyberbullying cases. With the escalation of conflict, more cyberbullying behaviours were performed. Therefore, the frequency of cyberbullying behaviours involved can reflect the intensity of the cyberbullying. These showed how the stages of cyberbullying development emerged from this study. This is an important finding to inform the helping profession's direction in cyberbullying prevention.

The second main theme is the nature of cyberbullying. The roles of participation may vary from case to case: a perpetrator in one incident may be the victim in another. Also, playfulness and/or intention to hurt may be the motive for cyberbullying. The Internet is a new playground for young people; they can hang around, play and fight in the new territories. They think they can do whatever they want. School teachers, social workers, parents, and adults find it difficult to control and manage young people's behaviour in the cyberworld. Privacy and digital tracking, trust and identity are the themes that emerged to show the unique nature of cyberbullying. It seems to be difficult to escape from the risk of information leakage unless one avoids any online activities, such as posting messages, making new friends on social media, etc.

The third main theme is the impacts of cyberbullying. In all cases, the interviewees reported that cyberbullying is an extended part of bullying in reality. This study shows that cyberbullying is not a virtual action in the cyberworld alone: it have actual impacts on the everyday lives life and behaviour of young people. A victim may have learned cyberbullying behaviour and transformed into a perpetrator. Moreover, the psychological impact was obvious. Further investigations into the psychological impacts of bullying were examined in Phase Two of this study. Family support is an important factor affecting the help-seeking behaviour of victims, and more discussion on the service implications of this can be found in Chapter Six.

Chapter Five: Quantitative Study on Cyberbullying (Phase Two)

Following on from the findings in Chapter Four, the aim of Phase Two was to utilise Bronfenbrenner's (2009) ecological systems theory as a guiding framework to explore the social phenomenon of cyberbullying among young people in Chinese society through a quantitative lens, in order to make generalisations. The instruments used for the Phase Two survey were developed based on ecological perspectives, previous studies into cyberbullying and the findings from Phase One.

The following chapter presents the rationale and findings for the Phase Two quantitative study. Firstly, the rationale for using a quantitative method and the resulting research questions are discussed. Then the research method, including participants, instruments and pilot tests are presented. Next, the procedures of research implementation and data collection are discussed. The results are then presented. Finally, the empirical results and limitations of the quantitative study are discussed.

Rationale for Phase Two Survey

As informed by ecological systems theory (Bronfenbrenner, 2009), the ecological systems have an important influence on the development and behaviour of young people. Using a quantitative approach allows the researcher to study and compare cyberbullying behaviour depending on the different ecological systems. Importantly, quantitative data provides a benchmark for measuring the cyberbullying phenomenon and its relationship with other concepts suggested from the literature. This information is important for the helping profession to identify and provide timely support for young people affected by cyberbullying. Through quantitative data,

structured and extensive information in the form of numerical measurement can be collected. The cases can be measured and variations compared by applying statistical methods (Creswell, 2013; Neuman, 2003). Cross-sectional research was adopted for this study. Although causation cannot be determined in correlational research, this approach has benefits such as providing many different types of a case in a short period of time (Creswell, 2013; Johnson & Christensen, 2012). Importantly, it provides a mechanism through which to examine different groups of participants and variations in their cyberbullying involvement. The information is critical in helping the researcher to identify the high-risk group in cyberbullying.

Research Questions

Based on the research literature and findings from Phase One, Phase Two focused on a number of key components associated with cyberbullying. First, given that previous research has shown that the prevalence rate of cyberbullying ranges from 10% to 40% (Kowalski et al., 2012) the ten types of cyberbullying behaviour identified in phase one of this study were adopted as a behaviour checklist to measure the cyberbullying prevalence rate.

Second, the findings from Phase One demonstrated that young people's role in cyberbullying is more complicated than traditional bullying; they can be both a perpetrator and a victim. This is because of the complex nature of the cyberworld, which includes perceived anonymity and power differences (Hinduja & Patchin, 2008; Ybarra et al., 2012). Therefore, both perpetrator and victim prevalence rates are considered in this research.

Third, there are a number of factors which affect the extent of cyberbullying among young people in Chinese society. Bronfenbrenner (2009) ecological model suggests that the interaction

of Microsystems affects young peoples' development and behaviour. To verify the impacts of those factors, this research aims to identify the influence of a Microsystem, personal skill, on the cyberbullying behaviour of young people. Moreover, the Macrosystem, such as cultural differences in the different countries and cities of the research, may be related to the prevalence and impact of cyberbullying on young people. A number of studies have attempted to explain cultural differences in cyberbullying (Barlett et al., 2014; Li, 2008). Hence, the multilevel nature of the data in this study, individuals nested within geographical areas or cities, facilitates an analysis to test whether two randomly selected young people from the same city will tend to be more alike than two individuals from different cities.

Although Hong Kong, Guangzhou, and Macao are in the southern part of China and have a well-developed social service network in the district, are Chinese cities and speak the same dialectic language, the three cities have developed within independent political environments, legal systems and economic policies. The differences in legal systems and legislation procedures are stated in the Basic Law, which serves as the constitutional document of the Hong Kong and Macao Special Administrative Region (China, 1990, 1993). This provides an excellent platform for examining the influence of cultural factors on cyberbullying behaviours among young people.

Fourth, a number of previous studies have identified the anxiety, stress, depression, and social difficulties that are correlated with cyberbullying (Bauman et al., 2013; Campbell et al., 2013). Therefore, the anxiety, depression and stress levels of the respondents are dependent variables to determine the impact of cyberbullying in the present study.

Following on from Phase One and observations from previous empirical studies on cyberbullying, three research questions (RQ2 to RQ4) developed throughout this chapter were used as a basis for the following predictions:

RQ2: What is the cyberbullying prevalence rate among Chinese young people?

RQ3: What are the significant variables correlated with cyberbullying?

RQ4: What is the psychological impact of cyberbullying?

Justification for Hypotheses

For RQ2, the cyberbullying prevalence rate was measured for the perpetrator and victim aspects as a benchmark to show the magnitude of the phenomena in the involved cities (Barlett, 2015; Hamburger et al., 2011; Levy et al., 2012). As informed by Bronfenbrenner's (2009) ecological model, the Exosystem and Macrosystem also have an impact on young people.

$H_0 : \mu_1 = \mu_2$ The cyberbullying prevalence rate (perpetrator score) is the same among the cities

For RQ3, the cyberbullying behaviour of young people is suggested to be affected by personal and environmental factors. It is predicted that the young people's personal factors (gender, age, skills, etc.) and relationship with the Microsystem are correlated with their cyberbullying behaviour. The null hypothesis on the personal level is that that there is no correlation among the personal factors and environmental factors in the Microsystem. At city

level, the contextual factor is suggested to influence young people. Therefore, it is predicted that there will be city variations in cyberbullying behaviour (Bronfenbrenner, 2009; H. J. Johnson, 2012; Taiariol, 2010; Wong et al., 2014).

First Level (Personal level)

$H_0 : \beta_{1i}=\beta_{2i}=\cdots=\beta_{ki-1}=0$

Second Level (City level)

$H_0 : \sigma^2_e = 0$, No city differences

For RQ4, as informed form previous studies, it is predicted that cyberbullying is correlated with stress, depression and anxiety (Ortega et al., 2012; Smith et al., 2008).

$H0 : \beta1i=\beta2i=\cdots=\beta ki-1=0$

Methods

Data was collected via self-administered surveys. The benefit of using surveys is that they can improve generalisability by selecting samples from the population such that if the findings are supported across different research approaches, the confidence level in the research results can be greatly enhanced (Johnson & Onwuegbuzie, 2004). Furthermore, the survey research design is capable of collecting information from a specific group of people and then gaining insight into the entire population. The survey data is quantifiable and suitable for hypothesis testing and statistical analysis (De Leeuw & Dillman, 2008). This enables the researcher to use statistical methods to compare different case groups according to their ecological nature. See Chapter Three for full details on the choice of methods for this research and the ontological underpinnings.

Sample and Sampling Method

The population of this study is young people aged 24 or below in Hong Kong, Macao and Guangzhou.[1] Convenience sample was taken from the NGO service network in the three cities. Young peoples were invited to fill in the questionnaire through the NGO community service centres and schools within the data collection period. A total of 2,185 valid questionnaires were used in the analysis because 13 respondents were over 24 years old and therefore removed from the 2,198 completed questionnaires. The age range of respondents was from 9 to 24 years old, and the mean age was 16.7 (SD=3.37); the sample comprised 1001 males and 1176 females (8 did not specify). Of the total participants, 262 had attended school to primary level, 556 to secondary junior, 724 to secondary senior and 638 to tertiary level. The overall response to this survey was

[1] This study adopted the United Nations definition of youth as persons aged 24 or below (HKSAR, 2013; United Nations, 2016).

good: 2,347 questionnaires were collected, with 2,198 fully completed. The overall response rate was 79.5 % and the questionnaire completion rate was 93.6%.

Procedure

The focus of this study was Chinese young people's experiences of cyberbullying. In order to study the phenomenon at the different levels of ecological systems suggested by Bronfenbrenner (2009), the data collection extended to other Chinese cities. Three NGOs in Southern Chinese cities with extensive service networks in local youth services were invited to be research partners. In the first instance, the researcher sent research information and sought the consent and approval of the NGO's administrator. After the NGO administrator agreed to join the study, they were asked to invite their members to join the survey and provide a local counselling service hotline for respondents in need. Finally, NGOs in Hong Kong, Macao and Guangzhou were invited to be research partners in this study.

The research partners invited young people receiving their service to complete a self-administered questionnaire from February to June 2016. The completed questionnaires were collected by the Hong Kong Playground Association, União Geral das Associações dos Moradores de Macao and Guangzhou Youth Cultural Palace, and sent to the researcher for data input and coding. Three thousand paper-based and Web-based questionnaires were delivered to the NGOs.

Materials

The survey used in the present study consisted of 66 questions in three sections (Table 6). The first section comprised 41 questions intended to measure the social interaction, cyberbullying behaviour and help-seeking pattern of respondents in the cyberworld. The second section had 21 questions to measure the psychological status of the respondents. The final section collected demographic data. The questions included age, gender, education level and daily online hours.

Table 6 *Questionnaire Items*

Question	Items	Description and reference
Q1-Q4	Social interaction in Cyberworld	General questions
Q5-Q24	Cyberbullying behaviour checklist	(Kowalski et al., 2014), details refer to Table 2
Q25	Perpetrator	Perpetrator single-item measurement
Q26	Reasons for cyberbullying	(König et al., 2010; Stone, 2014)
Q27	Victim	Victim single-item measurement
Q28	Who did the cyberbullying	
Q29	Response to cyberbullying	(König et al., 2010)
Q30	Help-seeking behaviour	(Wong et al., 2014)
Q31-Q35	Microsystem relationship	(Bronfenbrenner, 2009)
Q36-Q41	Personal factors	(Papatraianou et al., 2014)
D1-D21	DASS21	(Taouk, Lovibond, & Laube, 2001)
Q63-Q66	Demographic data	Gender, Age, Education

Relationship with Microsystem s and Personal Factors

The first section of the questionnaire included five self-developed questions, to examine the respondents' relationship with Microsystems, such as family, peers, school and neighbourhood, on a five-point Likert scale ranging from very poor to very good. This measured the respondents' interaction among Microsystems as suggested by the ecological system framework (Bronfenbrenner, 2009). In addition, personal factors such as social skills, academic performance, computer skills, social-economic status and physical strength were measured by a self-rated five-point Likert scale from lowest to highest (Papatraianou et al., 2014). The five items measuring the respondents' relationship with the Microsystems was (α= 0.803), which suggests that the scale has good internal consistency.

Measurement of Cyberbullying

Cyberbullying is defined as repeated intentional aggressive behaviour between perpetrator and victim with an imbalance of power in the cyberworld (Kowalski et al., 2014; Olweus, 2013; Smith et al., 2008). In measuring cyberbullying, previous research has demonstrated that a multiple

items approach was found to be more reliable than a single-item question asking whether the respondent has bullied others or been victimised (Menesini & Nocentini, 2009). In this study, the cyberbullying prevalence rate and the extent of cyberbullying were measured by ten types of intentional aggressive behaviour, which were identified in chapter two: literature review and informed by the Phase One interview results (Kowalski et al., 2012; Slonje et al., 2013; Willard, 2007). The intensity of the behaviour was measured by a self-reported four-point Likert scale (0=Never, 1=Once or twice, 2=A few, and 3=Many times). Even after a single harmful attack against the victim, the resulting digital trace online can induce multiple harms (Howison et al., 2011; Vandebosch & Van Cleemput, 2008). According to the definition of cyberbullying adopted for this study, repeat occurrence means the harm to the victim is not on a single occasion. In the prevalence rate measurement, the respondents were counted as affected by cyberbullying if they reported that they had encountered at least one out of the ten cyberbullying behaviours in last year.

Perpetrator Score

Ten questions (Q5, 7, 9, 11, 13, 15, 17, 19, 21, 23) measured the extent of the perpetrator's cyberbullying behaviour. Each question measured the extent and intensity of a particular cyberbullying behaviour on a four-point Likert scale (0=Never, 1= Once or twice, 2= A few, 3= Many). The mean of the ten questions provided a Perpetrator score rank from 0 to 3. A Perpetrator score of zero means the respondent has performed no cyberbullying behaviour at all; the higher the score, the higher the intensity of cyberbullying behaviour performed.

Victim Score

Another ten questions (Q6, 8, 10, 12, 14, 16, 18, 20, 22, 24) measured the extent of a victim's experience of cyberbullying. As with the Perpetrator score, a Victim score of zero means the respondent has no experience of cyberbullying; a higher score means a higher extent of being affected by cyberbullying behaviour.

Roles of Respondent in Cyberbullying

Although the questionnaire only measured perpetrator and victim experience in cyberbullying, the computed Perpetrator and Victim scores can be used as a mean to indicate the roles of respondents in cyberbullying. A perpetrator score (PS) of zero indicates that the respondent has not been involved in any cyberbullying behaviour, while a victim score (VS) of zero shows the respondent has not been cyberbullied before. In that matrix, we can identify four types of role in cyberbullying: bystander, perpetrator, victim, perpetrator victim. In our existing collected data, perpetrators and victims are rare in comparison with bystanders and perpetrator victims.

Depression Anxiety Stress Scales 21

The second section of the survey contained 21 questions measuring the psychological status of the respondents using the Depression Anxiety Stress Scales 21. The scale was developed by Lovibond and Lovibond (1996) to assess the degree of severity of depression, anxiety and stress of respondents. The original version was made up of 42 self-reported items; a shorter Chinese version was provided and validated by (Taouk et al., 2001) The shortened version was adopted in this study to minimise the time required to complete the whole questionnaire. The scale is divided into three subscales of 7 items with similar content on depression, anxiety and stress respectively. Each

item is self-rated on a four-point Likert scale from zero to three, indicating the respondent's experience of each state over the past week. The scores of each subscale ranged from 0 to 42 to measure the negative emotional states of depression, anxiety and stress (Lovibond & Lovibond, 1996).

Language of the Instrument

Most of the current research into cyberbullying has been published in English. Therefore, the preliminary questionnaire was developed in English to facilitate the comment and reviewing process with the researcher's academic supervisor. However, English is not the mother tongue of young people in Hong Kong, Guangzhou and Macao, so the final version of the questionnaire was translated into Chinese to ensure good comprehension of the questionnaire in the data collection process.

To keep the measures as consistent between the Chinese and English versions of the questionnaire, two independent Hong Kong university students were invited to carry out a back translation to confirm the consistency of both versions (Van de Vijver & Tanzer, 1998). Both translators were native Chinese and studying at a local university using English as the medium of instruction. They were also familiar with the Internet and social media usage. They read the first two chapters of this thesis before translating the questionnaires to ensure their understanding of the concepts for this study. The draft version of the bilingual questionnaire was provided to the research partner NGOs to check that the expression and wording of the questions were meaningful in their cultural context.

Phase Two Pilot Test

A pilot test was completed to test the questionnaire before the main data collection. A total of 37 young people of 9-24 years old were invited to answer the questionnaire. The purpose of the pilot test was to improve the questionnaire design and data collection process. The pilot test participants were asked to give their feedback on the questionnaire and the data collection procedure. The time taken to complete the questionnaire ranged from five to twelve minutes.

The findings from the pilot test are summarised as follows: the respondents found that the survey introduction was good enough to provide a good understanding of their right to withdraw and their privacy protection. Most of the respondents replied that the length of the survey was appropriate; only two respondents from tertiary education commented that the survey was too long. In general, the respondents could understand the description and questions related to cyberbullying. However, a clearer definition was requested for the concepts of online friend and social interaction. In addition, the respondents suggested that the ten-point scale for measuring respondent relationship with microsystem (Appendix 10: Phase Two Survey Questionnaire - Q31 to Q41) was difficult to manage. A number of revisions were made to the final questionnaire, such as providing a clear definition of ‘online friend’ and ‘social interaction’ in the questions. The relationship with microsystem measurement scale was reduced from ten to five points. Question logic and skip questions were marked more clearly. All of these changes aimed to make it easier for respondents to answer the questionnaire (Appendix 9: Phase Two Pilot Study and Feedback).

Reliability and Construct Validity of Measures

The reliability and validity of each of the measures used in this study were tested as follows:

Cyberbullying Perpetrator Score

Internal consistency for the cyberbullying Perpetrator Score measure was tested using Cronbach's alpha. The results showed that the coefficient for the ten items in measuring the Perpetrator Score was 0.9 ($\alpha \geq 0.9$), suggesting that the scale has excellent internal consistency (Cronbach, 1951; Darren & Mallery, 1999). Principal component analysis was adopted to provide construct validity evidence for the Perpetrator Score. To ensure that data are suitable for analysis, it is important that the variables should be correlated to some extent, but not perfectly correlated, as this would suggest multicollinearity (Field, 2005). The correlation coefficients ranged from 0.56 to 0.73 (see Table 7) suggesting that there is likely to be a strong one-dimensional underlying construct.

Table 7 *Perpetrator score item–total correlation*

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5 Harassment (P)	.591	.896
Q7 Outing & Trickery (P)	.561	.898
Q9 Denigration (P)	.731	.886
Q11 Masquerade (P)	.658	.890
Q13 Flaming (P)	.628	.894
Q15 Sexting (P)	.718	.887
Q17 Happy slapping (P)	.689	.890
Q19 Impersonation (P)	.709	.888
Q21 Cyber stalking (P)	.736	.886
Q23 Exclusion (P)	.637	.891

Bartlett's test checks equal variances across samples and was found to be significant ($p < 0.00$) for the cyberbullying perpetrator score, demonstrating it was suitable for principal component analysis. The KMO measure tests whether the partial correlations among variables are

small (Field, 2009). A measure below 0.5 is unacceptable and values above 0.9 are marvelous (Kaiser, 1974, p. 35). In this case, the KMO for all 10 variables was 0.933, which demonstrated the suitability of the sample for this test. The principal component analysis of the 10 variables yielded two factors based on Kaiser's criterion of retaining eigenvalues greater than one (Field, 2009). The first factor extracted produced an eigenvalue=5.51 and justified 55.19% of the variance. The second factor obtained an eigenvalue of 1.01, explaining 10.19% of the variance. The first-to-second eigenvalues ratio of the Perpetrator Score was 5.25 (5.51/1.01). Furr (2011, p. 127) suggests that an eigenvalue ratio over 3:1 is sufficient to support a unidimensional scale. A single factor measure of cyberbullying behaviour was therefore adopted in the present study.

Cyberbullying Victim Score

The Cronbach's alpha for the Cyberbullying Victim Score was 0.895 ($\alpha \geq 0.8$), suggesting that the items have relatively high internal consistency. The correlation coefficients ranged from 0.53 to 0.73 (see Table 8). To determine the construct validity of the Victim score, principal components analysis was conducted. Both the rate of Kaiser-Meyer-Olkin (0.93) and the Bartlett test of sphericity ($p < 0.00$) demonstrated the suitability of the sample for this test.

In the principal component analysis of the Victim Score, only one factor extracted with eigenvalue= 5.357 and justified 53.57% of the variance. The second factor was dropped as the eigenvalue (0.95) was smaller than one. The results showed that that the Victim Score items are unidimensional and suitable to measure the extent of cyberbullying victim behaviour.

Table 8 *Victim Score item–total correlation*

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q5 Harassment (P)	.600	.889
Q7 Outing & Trickery (P)	.533	.894
Q9 Denigration (P)	.726	.879
Q11 Masquerade (P)	.649	.884
Q13 Flaming (P)	.641	.886
Q15 Sexting (P)	.630	.885
Q17 Happy slapping (P)	.672	.885
Q19 Impersonation (P)	.694	.883
Q21 Cyber stalking (P)	.713	.881
Q23 Exclusion (P)	.665	.884

Note. N=2,185

Psychological Well-being

The Cronbach's alpha coefficient for the 21 items measuring negative emotional states was 0.953 ($\alpha \geq 0.9$). It is suggested that the whole DASS21 scale has excellent internal consistency. The Cronbach's alphas of the three subscales were good: 0.867 for stress (7 items), 0.864 for anxiety (7 items), and 0.895 for depression (7 items). All the subscales showed good internal consistency (Cronbach, 1951; Darren & Mallery, 1999).

Stress subscale

Initially, the factorability of the 7 items in the stress subscale was examined. Bartlett's test checks equal variances across samples and was found to be significant ($p < 0.05$). The Kaiser-Meyer-Olkin measure of sampling adequacy was .917. Given these overall indicators, Principal component analysis was deemed to be suitable. The principal component analysis of the stress subscale first factor extracted with eigenvalue= 4.334 and justified 61.91% of the variance. Only one component was extracted in analysis. The results showed that that the stress subscale was unidimensional and suitable to measure the stress of respondents.

Anxiety subscale

For the anxiety subscale, Bartlett's test checks equal variances across samples and was found to be significant ($p < 0.00$). The Kaiser-Meyer-Olkin measure of sampling adequacy was .898. Given these overall indicators, factor analysis was found to be suitable in this study.

The principal component analysis of the anxiety subscale first factor extracted with eigenvalue= 3.937 and justified 56.25% of the variance. Only one component was extracted in analysis. The results showed that that the anxiety subscale was unidimensional and suitable to measure the anxiety of respondents.

Depression subscale

In the depression subscale, Bartlett's test checks equal variances across samples and was found to be significant ($p < 0.00$). The Kaiser-Meyer-Olkin measure of sampling adequacy was .917. Factor analysis was suitable in this study. The principal component analysis of the depression subscale first factor extracted with eigenvalue= 4.334 and justified 61.91% of the variance. Only one component was extracted in analysis. The results showed that that the depression subscale was unidimensional and suitable to measure the depression of respondents.

Results

The questionnaire data was input into SPSS 23 and MLwiN 3.0 for statistical analysis. and correlation analysis for all the factors raised in the hypotheses in this study. The cyberbullying prevalence rate was computed in the perpetrator and victim aspects. Analysis of variance was used to compare the cities' prevalence rates to answer RQ2.

For RQ3, the analyses were performed in two stages. Hierarchical multiple regression was carried out first to assess the contribution of different blocks of proposed independent variables on the cyberbullying phenomenon. Then, the final model of regression was analysed using multi-level modelling to assess city differences by using MLwiN 3.0 developed by the Centre for Multilevel Modelling based at the University of Bristol.

For RQ4, hierarchical multiple regression was used to examine the psychological impacts of cyberbullying to identify cyberbullying's influence on stress, anxiety and depression

Descriptive Statistics

The basic statistical analysis results showed that the respondents' average daily online hours were 4.74 hours (SD=3.95). The top five social platforms among respondents were Wechat (61.8%), WhatsApp (55.7%), Facebook (53%), Instagram (43%) and QQ (42%). The self-reported number of online friends was (67.3%) fewer than 100, and (9.6%) over 500 online friends. One third of the respondents (33.4%) replied that they have many social interactions in the cyberworld. The findings are presented below in line with the research questions.

As stated in

Table 9, To get revenge (33.9%), To vent my anger (30.8%), and For fun (29.4%) were the top three main reasons for bullying others reported by survey respondents. The highest reported

reason for male respondent was To get revenge (40.1%), while To vent my anger was the highest reported reason for female.

Table 9 *Reasons for cyberbullying cross-tabulated tables by gender*

	Percent of Cases		
Reasons for cyberbullying	Male	Female	Total
To get revenge	40.1%	25.2%	33.9%
To vent my anger	30.8%	31.3%	30.8%
For fun	30.2%	28.7%	29.4%
They deserved it	24.4%	21.7%	23.5%
Because they picked on me at school	19.8%	27.8%	22.8%
I hate them	20.3%	18.3%	19.4%
Because others were doing it	18.6%	13.9%	16.6%
To demonstrate power	12.3%	12.2%	12.5%
Other	7.0%	13.9%	9.7%
Total	203.5%	193%	198.6%

Note. N=2185, Multiple response analysis, total percentage may be over 100%

The perpetrator's relationship with victim is shown in Table 10. Someone else from school (34.7%), Stranger (29.3%), and Friend (28.4%) were the top three types of relationship reported in the survey. The main perpetrator for female was Someone else from school (40.6%), Stranger (33.7%) was the main perpetrator for male respondent.

Table 10 *Who did the cyberbullying cross-tabulated tables by gender*

	Percent of Cases		
Who did the cyberbullying	Male	Female	Total
Someone else from school	28.9%	40.6%	34.7%
Stranger	33.7%	24.4%	29.3%
Friend	30.5%	25.6%	28.4%
Someone I knew from the cyberworld	17.9%	8.1%	13.4%
Ex-friend	5.3%	14.4%	9.4%
Other	7.4%	8.8%	8.0%
Ex-boyfriend or girlfriend	5.3%	8.8%	6.8%
Many people	2.1%	3.1%	2.6%
Total	131.1%	133.8%	132.4%

Note. N=2185, Multiple response analysis, total percentage may be over 100%

The victims' response to cyberbullying is showed in Table 11. Did nothing (34.2%), Blocked bully (23.9%) and Left site (3.2%) were the top three responses reported in the survey. Did nothing was the main response to cyberbullying for both male (35.9%) and female (32%) respondents.

Table 11 *Response to cyberbullying cross-tabulated tables by gender*

	Percent of Cases		
Response to cyberbullying	Male	Female	Total
Did nothing	35.9%	32.0%	34.2%
Blocked bully	19.0%	28.7%	23.9%
Left site	22.1%	23.8%	23.2%
Sought help from others	17.4%	29.3%	22.9%
Logged off computer	15.9%	12.2%	14.2%
Changed screen name or email	14.9%	12.2%	13.4%
Other	11.3%	13.3%	12.1%
Total	136.4%	151.4%	143.9%

Note. N=2185, Multiple response analysis, total percentage may be over 100%

Regarding the help-seeking patterns of cyberbullying victims, Peers (54.6%), I will handle by myself (49.8%), and Parent / Family member (39.1%) were the top three options reported in the survey (Table 12). Most female seek help from Peers(63.2%), I will handle by myself (53%) was male main behaviour in cyberbullying.

Table 12 *Help-seeking behaviour cross-tabulated tables by gender*

	Percent of Cases		
Seek help from	Male	Female	Total
Peers	44.4%	63.2%	54.6%
I will handle by myself	53.0%	47.1%	49.8%
Parent / Family member	33.3%	43.9%	39.1%
School Teacher	25.4%	31.1%	28.6%
Police	23.0%	23.0%	23.0%
Social worker	20.4%	22.8%	21.7%
Other	3.4%	3.0%	3.2%
Total	203.0%	234.1%	219.9%

Note. N=2185, Multiple response analysis, total percentage may be over 100%

RQ2 What is the cyberbullying prevalence rate among Chinese young people?

The Perpetrator and Victim Score were developed for this study as an instrument to measure cyberbullying. A Perpetrator or Victim Score higher than zero indicated that the respondent had experienced cyberbullying in the last year.

The prevalence rate is presented by descriptive statistics in Table 13. The results indicated that the perpetrator prevalence rate was 63.7%, whereas the victim prevalence rate was 71%. This means that 63% of the respondents had performed at least one type of cyberbullying behaviour on others, and 71% of the respondents had suffered from at least one type of cyberbullying behaviour within the last twelve months.

Table 13 *Perpetrator and Victim Prevalence rate*

Cyberbullying behaviour	Perpetrator Prevalence rate	Victim Prevalence rate
Harassment	35.9%	41.4%
Outing & Trickery	33.8%	42.8%
Denigration	18.7%	24.8%
Masquerade	28.8%	29.1%
Flaming	37.8%	41.7%
Sexting	14.6%	26.5%
Happy slapping	12.3%	12.8%
Impersonation	14.5%	16.7%
Cyber stalking	16.0%	21.2%
Exclusion	26.8%	23.7%
Overall	63.7%	71.0%

Note. N=2185, encountered Cyberbullying at least once during the past year

In further analysis on the reported prevalence rate, Table 14 and Table 15Table 15 show the percentages of other responses for each cyberbullying behaviour. Flaming, Harassment and Outing were the highest three reported as happening “Many” times for both perpetrator and victim in the last twelve months.

Table 14 *Cyberbullying behaviours and Perpetrator rate*

Cyberbullying behaviour	Never	Once or Twice	A few	Many
Harassment	64.1%	21.3%	10.1%	**4.5%**
Outing & Trickery	66.2%	19.5%	10.4%	**3.9%**
Denigration	81.4%	11.8%	5%	1.8%
Masquerade	71.2%	17.8%	7.6%	3.4%
Flaming	62.2%	20.9%	11.5%	**5.4%**
Sexting	85.4%	7.5%	4.7%	2.4%
Happy slapping	87.7%	7.2%	3.4%	1.7%
Impersonation	85.5%	8.4%	4.5%	1.5%
Cyber stalking	84%	9.5%	4.4%	2.1%
Exclusion	73.2%	18.4%	6%	2.3%
Overall	36.3% [a]	53.7%	8.4%	1.6%
Perpetrator Prevalence rate	**63.7%** =	(53.7%+8.4%+1.6%)		

Note. N=2185, [a] Perpetrator Score =0

Table 15 *Cyberbullying behaviours and Victimisation rate*

Cyberbullying behaviour	Never	Once or Twice	A few	Many
Harassment	58.6%	24.1%	11.8%	**5.5%**
Outing & Trickery	57.2%	25.9%	12.3%	**4.6%**
Denigration	75.2%	15.6%	6.8%	2.4%
Masquerade	70.9%	18.1%	7.9%	3.1%
Flaming	58.3%	22.7%	12.8%	**6.1%**
Sexting	73.5%	16.3%	6.9%	3.4%
Happy slapping	87.2%	7.4%	3.8%	1.6%
Impersonation	83.3%	10.5%	4.7%	1.5%
Cyber stalking	78.8%	13.8%	5.2%	2.1%
Exclusion	76.3%	16.3%	5.5%	1.9%
Overall	29% [a]	58.7%	10.6%	1.7%
Victim Prevalence rate	**71%** =	(58.7%+10.6%+1.7%)		

Note. N=2185, [a] Victim Score 0=Never

Cyberbullying intensity

The intensity of cyberbullying as perpetrator and/or as victim were measured by the mean score of the cyberbullying behaviours checklist. Each cyberbullying behaviour score ranged from zero to three to represent the frequency of the behaviours (0=Never,1= Once or twice, 2= A few, 3= Many). Two mean scores of the behaviour checklist were calculated for the perpetrator and victim extent of cyberbullying in this study. The mean perpetrator score was 0.36 (SD=0.52) while the mean victim score was 0.42 (SD=0.54).

A Perpetrator or Victim Score of zero indicates that the respondent did not experience any cyberbullying in the last year. This also reflects the prevalence rate presented in the previous paragraphs.

City Comparison on Perpetrator and Victim Scores

The city comparison served as the location triangulation in the study. Paired sample t-tests were conducted to compare the Perpetrator and Victim Scores in Hong Kong, Macao and Guangzhou. All the tests (Hong Kong $t=-5.47$, $p<0.00$, Macao $t=-4.81$, $p<0.00$, Guangzhou $t=-8.07$, $p<0.00$) showed the Victim Score was significantly higher than the Perpetrator Score in all three cities.

The findings from the one-way ANOVA analyses (Table 16) and post-hoc tests (

Table 17) indicated that significant differences were found between the cities in terms of both the Perpetrator and Victim Score, suggesting extent of cyberbullying in the three cities was different. Differences were found among the cities in the Perpetrator Score, $F (2, 2168) = 12.35$, $p<0.000$. Hong Kong ($M = 0.31$, $SD = .46$) reported a lower Perpetrator Score than Macao ($M = 0.43$, $SD = .44$) and Guangzhou ($M = 0.42$, $SD = .63$). For the Victim Score, differences were also found among the cities, $F (2, 2167) = 19.56$, $p<0.000$. Hong Kong ($M = 0.36$, $SD = .47$) reported a lower Victim Score than Macao ($M = 0.52$, $SD = .47$) and Guangzhou ($M = 0.49$, $SD = .64$).

Table 16 Summary of one-way ANOVA on the Perpetrator and Victim Score between cities

		Sum of Squares	df	Mean Square	F	Sig.
Perpetrator Score	Between Groups	6.679	2	3.339	12.351	.000
	Within Groups	586.154	2168	.270		
	Total	592.833	2170			
Victim Score	Between Groups	11.241	2	5.620	19.559	.000
	Within Groups	622.696	2167	.287		
	Total	633.937	2169			

Note. N=2185

As a statistically significant result was found, we proceeded to compute a post-hoc test to identify the patterns and figure out where the differences occurred in the collected data. The Scheffe test was adopted as the sample sizes were unequal among the three cities (Field, 2009).

Table 17 shows that Hong Kong's Perpetrator and Victim Scores were significant lower than Macao's ($p = .002$, $p = 0.000$) and Guangzhou's ($p = .000$, $p = 0.000$). Macao and Guangzhou did not differ significantly from each other in their Perpetrator and Victim Scores. Taken together, these results showed that both Guangzhou and Macao have a higher Perpetrator and Victim Score than Hong Kong.

Table 17 Scheffe test on cities' prevalence rates

	(I) Cities	(J) Cities	Mean Difference (I-J)	Std. Error	Sig.
Perpetrator Score	Hong Kong	Macao	-.12098*	.03402	.002
		GuangZhou	-.10666*	.02464	.000
	Macao	Hong Kong	.12098*	.03402	.002
		GuangZhou	.01432	.03599	.924
	GuangZhou	Hong Kong	.10666*	.02464	.000
		Macao	-.01432	.03599	.924
Victim Score	Hong Kong	Macao	-.16174*	.03499	.000
		GuangZhou	-.13579*	.02541	.000
	Macao	Hong Kong	.16174*	.03499	.000
		GuangZhou	.02596	.03701	.782
	GuangZhou	Hong Kong	.13579*	.02541	.000
		Macao	-.02596	.03701	.782

Note : N=2185, * The mean difference is significant at the 0.05 level.

RQ3 What are the significant variables correlated with cyberbullying?

In answering this question, hierarchical multiple regression was adopted to examine the correlation of the independent variables with the dependent variable, that is the cyberbullying behaviour performed (perpetrator score) by young people in this study. Multilevel modelling was employed to identify the model's inter-city variation.

The independent variables suggested in the previous chapters were age, gender, daily online time and cyberbullying experience (victim score). The correlations amongst the dependent and independent variables are examined in Table 18. All correlations were positive with the Perpetrator and Victim Scores, except the relationship with the Microsystems, which was found to be negative. Gender was recoded into a dummy variable to be included in the model, with male coded as zero and female coded as one. Only a weak to moderate relationship was observed among

the independent variables, including age and daily online hours (.02-0.19). Moreover, the correlation shows that the data is suitable for examination through multiple linear regressions.

Table 18 *Correlation table and descriptive statistics of variables*

Variables	1	2	3	4	5
1. Perpetrator score (DV)	-				
2. Victim Score (DV)	.877**	-			
3. Gender (Female)	-.210**	-.2**	-		
4. Daily online hours	.189**	.203**	.071**	-	
5. Relationship with Microsystems	-.140**	-.138**	-.002	-.079**	-
M	0.36	0.42	-	4.73	3.78
SD	.52	.54	-	3.94	.72

Note. N=2185, *p<.05. **p<.01.

The key assumptions of multiple regression such as normality of data, linearity of dependent variable and independent variables, homoscedasticity, multicollinearity and multivariate outliers (Bakija, 2013) were addressed before completing the analysis.

Personal-Level Factors Correlated with Cyberbullying Behaviour

The Perpetrator Score was the dependent variable and the potential predictors included gender, daily online hours, relationship with Microsystems and Victim Score. The factors were examined using hierarchical multiple regression analysis, using a stepwise model. Independent variables with significant correlation with the Perpetrator Score were entered into analysis. The stepwise criterion keeps the variables with a probability-of-F ≤0.05 and removes variables with a probability-of-F≥.1. The process systematically adds the most significant variable and removes the least significant variables from the analysis. Finally, significant factors were found in the analysis, and the regression coefficients are shown in

Table 19.

The hierarchical multiple regression revealed that at Model Two, demographic variables including gender and daily online time contributed significantly to the regression model, F (2,2061) = 99.27, p<.001) and accounted for 8.8% of the variation in the Perpetrator Score. Introducing the Victim Score explained an additional 68.1% of variation in the Perpetrator Score and this change in R^2 was significant, F (3,2060) = 2284.9, p<.001. The most important predictor of Perpetrator Score was Victim Score, which uniquely explained 68.1% of the variation in the Perpetrator Score. Finally, all the three independent variables in Model 3 (

Table 19) accounted for 76.9% of the variance in the Perpetrator Score.

Table 19 *Stepwise regression analysis of Perpetrator Score*

	Model 1			Model 2			Model 3		
Variables entered	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	0.481	.017	-	0.358	.020		.021	.011	
1. Gender	-.221	.023	-.211**	-.238	.022	-.227**	-.043	.011	-.041**
2. Daily online time [a]	-	-	-	.028	.003	.209**	.002	.001	.017
3. Victim Score [ab]	-	-	-	-	-	-	.838	.011	.864**
R^2		.044**			.088**			.769**	

Note. N=2185, *p<.05. **p<.01., [a] Excluded in Model1, [b] Excluded in Model 2

The following independent variables contributed to the Perpetrator Score. The participants' predicted Perpetrator Score for females is equal to (0.021 -0.043=-0.022) + 0.002 (Daily online hours) + 0.838 (Victim Score). Male participants' predicted Perpetrator Score is equal to 0.021 + 0.002 (Daily online hours) + 0.837 (Victim Score). The Victim score and Daily online hours were

significant predictors of the Perpetrator score. Females had a lower intercept (-0.022) than male respondents (0.023). Male respondents had a higher percentage than females acting as a perpetrator when suffering from the same cyberbullying (Victim Score) last year, after controlling for the other variables in the model. The null hypothesis is rejected in this research question. The cyberbullying behaviour of young people is correlated with personal factors including gender, daily online time and Victim Score significantly in the analysis, while the environmental factor correlation was not strong enough and dropped in the stepwise selection criterion.

Model variation among cities

The above selected regression model and data were imported into MLwiN 3.0 for multilevel modelling and presented as the following (Equation 1):

Equation 1 *Multilevel model of cyberbullying*

$$y_{ij} = \beta_{0j} + \beta_1 x_{1ij} + \beta_2 x_{2ij} + \beta_3 x_{3ij} + e_{ij}$$
$$\beta_{0j} = \beta_0 + u_{0j}$$

$$u_{0j} \sim \mathrm{N}(0, \sigma^2_{u0})$$
$$e_{ij} \sim \mathrm{N}(0, \sigma^2_e)$$
$$-2*loglikelihood = 147.076(2079 \text{ of } 2185 \text{ cases in use})$$

The Perpetrator Score is the dependent variable y, β_0 is the overall mean perpetrator score across cities, β_1 to β_3 are the independent variable coefficients. u_j is the effect of city j on personal-level cyberbullying behaviour, and e_{ij} is a personal-level residual. The city effects u_{0j}, which we

will also refer to as level two residuals, are assumed to follow a normal distribution with mean zero and variance σ^2_u .

We tested the null hypothesis that there are no group differences among cities, H_0: $\sigma^2_u = 0$, by comparing models by adding and removing the level two residuals in a likelihood ratio test. The multilevel model was fitted with the dataset in Equation 2. The between-group variance$\sigma^2_u = 0$, so the null hypothesis is true. After considering the gender, daily online time and Victim Score in the multilevel model, no variation was found in the cyberbullying behaviour (Perpetrator Score) among the cities.

Equation 2 *Multilevel model fitted with data*

$$\text{Perpetrator\_score}_{ij} = \beta_{0j} + \text{-0.043(0.011)FEMALE}_{ij} + \text{0.002(0.001)ONLINE}_{ij} + \text{0.837(0.011)Victim\_score}_{ij} + e_{ij}$$

$$\beta_{0j} = \text{0.021(0.011)} + u_{0j}$$

$$u_{0j} \sim \text{N}(0, \sigma^2_{u0}) \quad \sigma^2_{u0} = \text{0.000(0.000)}$$

$$e_{ij} \sim \text{N}(0, \sigma^2_e) \quad \sigma^2_e = \text{0.063(0.002)}$$

$$\textit{-2*loglikelihood} = \text{147.076(2079 of 2185 cases in use)}$$

RQ4 What is the psychological impact of cyberbullying?

For RQ4, hierarchical multiple regression was adopted to examine the independent variables' correlation with the dependent variables.

The correlations amongst the dependent (stress, anxiety, depression) and independent variables (age, daily online hours, relationship with Microsystems, personal skill, Perpetrator

Score and Victim Score) were examined (see Table 20). All correlations were positive with the dependent variables. Only weak to moderate relationships were observed among the independent variables, including age, daily online hours, Perpetrator Score and Victim Score (.065-0.416). The correlation showed that the data was suitable for examination through multiple linear regressions. The respondents' mean score on stress level was 12.04 (Normal), anxiety level was 9.9 (Mild), and depression level was 9.86 (Mild) (Lovibond & Lovibond, 1996).

Table 20 *Psychological impacts correlation table and descriptive statistics of variables*

Variables	1	2	3	4	5	6	7	8	9
1. Stress (DV)	-								
2. Anxiety (DV)	.867**	-							
3. Depression (DV)	.844**	.846**	-						
4. Age	.069**	.065**	.047**	-					
5. Daily online hour	.099**	.123**	.127**	.281**	-				
6. Relationship with Microsystems	-.126**	-.091**	-.146**	-.039	-.079**	-			
7. Personal Skill	-.071**	-.058**	-.107**	-.127**	-.026	.581**	-		
8. Perpetrator Score	.387**	.412**	.416**	.024**	.189**	-.140**	.037	-	
9. Victim Score	.389**	.406**	.405**	.026**	.203**	-.138**	.020	.877**	-
M	12.04	9.9	9.86	16.7	4.74	3.78	3.41	0.36	0.42
SD	9.64	9.05	9.67	3.37	3.96	.72	.68	.52	.54

Note. N=2185, *p<.05. **p<.01.

Three hierarchical multiple regression analyses were conducted to examine the relationship between cyberbullying and various psychological impacts including anxiety, depression and stress. The psychological impacts were the dependent variables. The demographic variables (age, daily online time) were entered into the model in Stage One. Then, all potentially confounding variables (relationship with Microsystem and personal skill) informed by ecological system theory and the

Phase One findings were added in Stage Two. In Stage Three, the Perpetrator and Victim Scores were entered to reveal the psychological impacts of cyberbullying.

Stress and Cyberbullying

The first hierarchical multiple regression revealed that at Model One, only one demographic variable, daily online time contributed significantly to the regression model, $F(1,2046) = 24.56$, $p<.001$) and accounted for 1% of the variation in stress. At Model Two, adding the relationship with Microsystems explained an additional 1.5% of variation in stress and this change in R^2 was significant, $F(2,2045) = 26.04$, $p<.001$. At Model Three, adding the Perpetrator and Victim Score, it further explained 14.1% of the variation in stress. Finally, all the independent variables in Model Three accounted for 16.6% of the variance in stress (Table 21).

Table 21 *Stepwise regression analysis of stress*

	Model 1			Model 2			Model 3		
Variables entered	*B*	*SE B*	*β*	*B*	*SE B*	*B*	*B*	*SE B*	*β*
Constant	10.919	.332		17.178	1.185		12.596	1.125	
1. Daily online time	.248	.053	.102**	.225	.053	.093**	.041	.050	.017
2. Relationship with Microsystems [a]				-1.625	.296	-.120**	-.936	.276	-.069**
3. Perpetrator score [ab]							3.661	.748	.204**
4. Victim Score [ab]							3.624	.770	.196**
R^2		.010**			.025**			.166**	

Note. N=2 185, *p<.05. **p<.01., [a] Excluded in Model 1,[b] Excluded in Model 2

The stress score was found to increase 3.661 for each Perpetrator Score and 3.624 per each Victim Score. On the other hand, the stress score decreased 0.936 for each relationship with Microsystems score increase.

Anxiety and Cyberbullying

The second hierarchical multiple regression revealed that at Model One, daily online time contributed significantly to the regression model, F (1,2046) = 33.262, p<.001) and accounted for 1.6 % of the variation in anxiety. At Model Two, adding the relationship with Microsystems explained an additional 0.7% of variation in anxiety and this change in R^2 was significant, F (2,2045) = 23.696, p<.001. Model Three, adding the Perpetrator and Victim Score, further explained 15.7% of the variation in anxiety. Finally, all the independent variables in Model Three (Table 22) accounted for 18% of the variance in anxiety.

Table 22 *Stepwise regression analysis of anxiety*

	Model 1			Model 2			Model 3		
Variables entered	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	8.571	.310		12.558	1.113		8.027	1.045	
1. Daily online time	.288	.050	.126**	.274	.050	.120**	.092	.047	.040
2. Relationship with Microsystems [a]				-1.035	.277	-.082**	-.351	.256	-.028
3. Perpetrator score [ab]							3.950	.716	.228**
4. Victim Score [ab]							3.285	.695	.195**
R^2		.016**			.023**			.18**	

Note. N=2 185, *p<.05. **p<.01., [a] Excluded in Model 1,[b] Excluded in Model 2

The anxiety score was found to increase 3.95 for each Perpetrator Score and 3.285 per each Victim Score.

Depression and Cyberbullying

The third hierarchical multiple regression revealed that at Model One, daily online time contributed significantly to the regression model, F (1,2046) = 35.603, p<.001) and accounted

for 1.7% of the variation in depression. At Model Two, adding the relationship with Microsystems explained an additional 1.9% of variation in depression and this change in R^2 was significant, $F(2,2045) = 37.751$, $p<.001$. At Model Three, adding the Perpetrator and Victim Score further explained 15.3% of the variation in depression. Finally, all the independent variables in Model Three accounted for 18.9% of the variance in depression (Table 23).

Table 23 *Stepwise regression analysis of depression*

	Model 1			Model 2			Model 3		
Variables entered	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	8.329	.332		15.452	1.184		10.696	1.114	
1. Daily online time	.319	.053	.131**	.293	.053	.120**	.103	.050	.042*
2. Relationship with Microsystem s [a]				-1.849	.295	-.136**	-1.127	.273	-.083**
3. Perpetrator score [ab]							4.771	.763	.257**
4. Victim Score [ab]							2.874	.741	.160**
R^2		.017**			.036**			.189**	

Note. N=2 185, *p < .05. **p < .01., [a] Excluded in Model 1,[b] Excluded in Model 2

The depression score increased 0.103 per daily online hour of respondents, 4.771 for each Perpetrator Score and 2.874 per each Victim Score. The depression score decreased 1.127 for each relationship with Microsystems score increase. From this data, daily online hours, relationship with Microsystem, Victim Score and Perpetrator Score were significant predictors of the depression of respondents, after controlling for the other variables in the model.

Discussion of Findings

Cyberbullying Prevalence Rate (RQ2)

The research question in this part was the cyberbullying prevalence in Chinese cities. As Rivers and Noret (2010) and other researchers highlight the multiple roles of young people in cyberbullying (H. J. Johnson, 2012; Levy et al., 2012), perpetrator and victim prevalence were presented. The results indicated that the perpetrator prevalence rate was 63.7%, whereas the victim prevalence rate was 71%, within the last twelve months. These results are in keeping with previous cyberbullying studies, Juvonen and Gross (2008) stated that 72% of their study respondents reported being victimised. Another study of 545 Taiwan junior high school students reported 20.4% were perpetrators and 35% were victims of cyberbullying (Huang & Chou, 2010). In spite of the variance in prevalence rates among studies, it still confirms that the prevalence of cyberbullying is alarming among young people. This finding confirmed that more than two thirds of the respondent experienced some form of cyberbullying in the last year. Cyberbullying is around our young people.

The mean Perpetrator and Victim Scores indicate that the occurrence of individual cyberbullying behaviour, however, is not frequent, as the mean scores were well below one (Score one = Once or Twice in a year). However, multiple behaviours were observed in a single cyberbullying incident mentioned. A number of studies on cyberbullying show that the behaviour checklist is more sensitive to measuring cyberbullying than single-behaviour measurements (Kowalski et al., 2014; Vaillancourt et al., 2010). This study is consistent with those studies: the overall cyberbullying prevalence reached one third of the respondents, which is much higher than the mean Perpetrator and Victim Scores.

With respect to Research Question 2, significant differences were found between Perpetrator and Victim Scores in Hong Kong, Guangzhou and Macao. This provided a reference for local government and NGOs on the cyberbullying prevalence and comparison with nearby cities. The null hypothesis was rejected.

Significant Variables Correlated with Cyberbullying (RQ3)

The third question aimed to examine the significant factors correlated with cyberbullying. The results of the hierarchical multiple regression model confirmed that the respondent's gender and their cyberbullying experience are significant factors in predicting their cyberbullying behaviour. Males had a high percentage of performing cyberbullying behaviour if other factors including daily online hours and relationship with Microsystems were controlled for as covariates in the analysis. This finding is contrary to previous studies which have suggested that female participation in cyberbullying outnumbers male (Kowalski & Limber, 2007; Slonje et al., 2013). This inconsistency may be due to those studies mainly focusing on certain cyberbullying behaviours such as spreading rumours and exclusion, and females tend to perform those behaviours when cyberbullying (Nansel et al., 2001).

What is surprising is that the influence of environmental factors on cyberbullying were not dominant. When respondent's daily online hour and gender were included as covariates, the relationship with the Microsystems did not show a significant correlation with cyberbullying behaviour. This finding is different from what the ecological perspectives suggest, that personal factors and interactions with the Microsystems influence young people. These conflicting results may be associated with the anonymous nature of cyberbullying, as the perpetrators perceived their aggressive behaviour as hidden and unable to be spotted by family, school and other Microsystems.

A note of caution is due here since the finding may result from the measurement and conceptualisation of these variables in this study.

Furthermore, the result is contrary to previous studies such as that of Patchin and Hinduja (2006) who found cyberbullying to be associated with computer skill and literacy. There are several possible explanations for this result. Firstly, personal computers and Internet devices are more popular and accessible for young people in 2016 than ten years before. Secondly, the user interfaces of computer applications and social media are developed to become more user friendly, so high computer literacy is not a prerequisite anymore. Therefore, cyberbullying is easier to accomplish than a decade ago.

Another important finding was that the respondent's cyberbullying victimisation experiences were highly positively correlated with their cyberbullying behaviour. The highly correlated situation between the extent of being cyberbullied (Victim Score) and extent of cyberbullying (Perpetrator Score) shows that young people's role in cyberbullying is complicated. The respondents' cyberbullying behaviour was highly correlated with their victimisation in cyberbullying experiences. This also accords with König et al. (2010), who show that the difference between cyberbullies and victims becomes blurred. This suggests that the perpetrator in one cyberbullying incident may become the victim in another incident.

One interesting result was found from the multilevel modelling analysis on the cyberbullying model at a city-level comparison. Although the cyberbullying prevalence rates varied among Hong Kong, Macao and Guangzhou, no city variation was found in the model illustrating the significant factors predicting cyberbullying behaviour. These results support previous European comparative studies on cyberbullying which show that the predictors for cyberbullying among bullies are remarkably stable across countries (Görzig & Ólafsson, 2013).

The findings of this study suggest that cyberbullying is a universal phenomenon, and national and cultural differences are not a significant predictor of young people's cyberbullying behaviour. Rather, it seems that cyberbullying among young people is more likely related to their gender, online time and behaviour patterns in the cyberworld.

Impact of Cyberbullying (RQ4)

With respect to the fourth research question, a strong relationship was found between cyberbullying and stress, anxiety and depression respectively for both perpetrators and victims. These results reflect those of Campbell et al. (2013) who also found that young people involved in cyberbullying have a higher level of anxiety and stress. The finding also accords with another study showing that cyberbullying is associated with depression and suicide attempts (Bauman et al., 2013).

One unexpected finding was that there is no significant different in anxiety and depression between perpetrator and victim (Table 20). This indicated that cyberbullying perpetrators may suffer a similar anxiety and depression level as the victims in a cyberbullying incident. The reason for this is not clear, but it may have something to do with the perpetrator's psychological well-being as well as the vicitm's.

Another important finding was that the relationship with Microsystems gave significant protecting factors to reduce the respondent's stress and depression level in cyberbullying. These results are in agreement with those obtained by Papatraianou et al. (2014) that strong family relationships can help young people to overcome online adversity; strong school and peer relationships are important for building young people's resilience. It is apparent from the above analysis that the stress, anxiety and depression of respondents were positively correlated with

cyberbullying. These findings indicate that further study is necessary into the protecting factors for young people to overcome the adverse effects of cyberbullying.

Conclusion and Limitations

A number of limitations need to be taken into account regarding the explanation and implication of the above findings. First, the findings cannot make inferences or claim causation of the phenomenon. The findings need more confirmation from further studies because of the exploratory nature of this research and the non-probability sampling strategy. It is better to adopt random sampling to provide a more secure generalisation for the whole population affected by cyberbullying. However, the triangulation of the quantitative findings with the qualitative findings in the next chapter offers more justification and enhances the validity of this study.

Together these results provide important insights into the cyberbullying phenomenon among young Chinese people. The present results are significant in at least two major respects. Firstly, this is a comparative study that shows the prevalence of cyberbullying among different Chinese cities with the same instrument measuring the phenomenon. Secondly, it confirms the detrimental impacts of cyberbullying on both perpetrator and victim. Further work is required to find out the causation and protective factors of cyberbullying to minimise the impacts on young people.

Chapter Six: Discussion

Introduction

In this chapter, in light of the pragmatic orientation of this study, both the qualitative and quantitative results are interpreted and combined to answer the research questions. Ecological system theory has been applied in this study to examine how various factors influence cyberbullying among young people. It also serves as a theoretical lens for the researcher to identify and explain interactions among the systems and factors using the data collected from this study. The theory also helps to identify and explain the impact of cyberbullying upon young people in the ecological systems. The Phase One qualitative results provide an understanding of cyberbullying in the context of Chinese society. The Phase Two quantitative data are valuable for exploring the correlations and associations among various personal skills, demographics data, societal factors and cyberbullying behaviour.

Data triangulation can be achieved by examining the similarities and differences between the two types of data and results. More complete knowledge of cyberbullying can be provided by collaboration between the qualitative and quantitative findings from the two phases of this study (Creswell & Clark, 2007). This chapter discuss the findings from both types of data with the literature in an integrated manner.

The following are the sequences of discussion in this chapter: the nature (RQ1) and extent (RQ2) of cyberbullying; the ecological factors affecting cyberbullying behaviour (RQ3); the impacts of cyberbullying (RQ4); the practical implications of the study, including the help-seeking pattern of young people and young people's response to cyberbullying; the limitations of this study and relevant topic suggestions for future study. Finally, the implications and conclusions are presented to demonstrate the contribution of this study.

Triangulation

A key notion of this study is that a mixed methods approach enhances the validity of the findings. Data from different sources can be compared and evaluated (Jick, 1979; Turner & Turner, 2009). Hence, triangulation was applied to enhance the validity in the data obtained for this study. The application of the Phase One qualitative and Phase Two quantitative method enabled Chinese young people to give comprehensive information on their experience of cyberbullying. The methodological triangulation was accomplished by using both interviews and questionnaires in the data collection and research design. The data sought from Hong Kong, Macao and Guangzhou in the quantitative part achieved space triangulation. Investigator triangulation was achieved by involving three NGOs coordinated by the researcher.

In the original planning, person triangulation was completed by involving different players in cyberbullying. However, the findings of the Phase One study revealed that young people's participation in cyberbullying is complicated. It is difficult to identify pure victims and perpetrators in their own cyberbullying experiences.

In the following discussion, the empirical qualitative and quantitative data are used to examine and answer the research questions stated in Chapter One. Firstly, the study findings will be discussed. The cyberbullying prevalence among adolescents in these Chinese cities can provide a point of reference for comparisons of future, similar studies in Western countries.

RQ1: What are the experiences of Chinese young people in Cyberbullying?

Cyberbullying Behaviours and Stages

Ten types of cyberbullying behaviour were identified in the Phase One study and informed the measurement of cyberbullying in Phase Two. As mentioned in the literature review,

cyberbullying behaviour is likely to change along with the advancement of technology. This study can only measure the most common behaviour in local context, and cannot cover all forms and variants of cyberbullying. From the collected case data in Phase One, three stages of cyberbullying development were examined. The cyberbullying cases started with initial conflict, then the escalation of conflict with the increase of aggressive behaviour. Finally, more people and the audience were mobilised to enhance the impacts of the attack. Some young people performed the aggressive actions for fun in the initial stage. As the conflict developed, hurting the target become the key motive of their action.

The stories in the qualitative study (Mary, Ken and Raymond) showed the sequence of cyberbullying development from initial conflict to more extensive and multiple aggressive behaviour in the latter stage. This observation supports evidence from the Phase Two findings that the stress, anxiety and depression of respondents were positively correlated with cyberbullying (see p.157).

Combining the findings from both phases, cyberbullying behaviours in the initial stage have the highest prevalence rate. Not all cyberbullying cases will be further developed into the escalation stage. Therefore, it is expected that the prevalence rate in the escalation stage will be less than in the initial stages. In the mobilisation stage, more people involved in the cyberbullying. In the Phase One findings, this may cause a higher intensity of attack, with a lower prevalence rate and higher impact on the victim. The most common cyberbullying behaviours presented in the initial stages were Outing and Trickery (42.8%), Flaming (41.7%), and Harassment (41.4%) (see Table 13). This also accords with the finding presented in the case studies. Mary and Zurg's conflict with their peers started from flaming and harassment, then developed in the escalation stages with

more types of aggressive behaviour such as denigration, sexting and exclusion (see p. 98 and p. 111).

This postulate agrees with the findings of the Phase Two survey, where the 71% Cyberbullying Prevalence rate was composed of 58.7% (Once or Twice attack in the initial stage), 10.6% (A few attacks in the escalation stage), and 1.7% (Many attack in the mobilisation stage) (see Table 15 *Cyberbullying behaviours and Victimisation rate*). A note of caution is due here since the young people may perform any types of cyberbullying behaviour at any stages (Wan, 2014).

Challenges to the Definition of Cyberbullying

Cyberbullying is defined as online intentional aggressive behaviour between perpetrator and victim with repeat occurrence in this study (Kowalski et al., 2014; Olweus, 2013; Smith et al., 2008; Tokunaga, 2010). One of the greatest challenges to the existing definition of cyberbullying is that the perpetrator's intention to hurt the victim may not still hold as a necessity in defining cyberbullying. The findings in this study provided the challenging notion that some cyberbullying perpetrators perform aggressive behaviour for fun. Ken and Raymond's cases in Phase One showed that Playfulness (see p. 127) instead of hurting other may be one of the key motives in cyberbullying. This also accords with the Phase Two survey, where 29.4% of respondent replied that they performed cyberbullying behaviour for fun (see

Table 9). As mentioned in the literature review, digital culture may affect young people's interaction with other. A considerable part of young people's life in the cyberworld involve gaming such as "World of Warcraft", "League of Legends", and "Second Life". In these massive multiplayer online role-playing games, competition and aggression are common in their gaming experience (Kaplan & Haenlein, 2010). It is possible that young people may think their aggressive

action in the cyberworld is another game among their peers. Moreover, the perceived anonymous nature of the cyberworld encourages potential perpetrators to perform aggressive acts online (Bauman, 2010; Hinduja & Patchin, 2008). In addition, the cyberbullying perpetrator cannot see the impact of their aggressive action on the victim, so the perpetrator's empathy and remorse are significantly reduced (Slonje et al., 2013; Sourander et al., 2010, p. 721). This further reduces the perpetrator's awareness of hurting the victim in the initial stage of cyberbullying.

Although the young people performing the aggressive behaviour are not intending to hurt the target, the cyberbullying can replicate the harm because of the self-recording and archived nature of digital media (Wesler et al., 2008). The perpetrator may underestimate the impacts of their action on the victim and the power of the techno subsystem. Several sad news headlines mentioned at the beginning of this study demonstrated the lethal power of cyberbullying.

Privacy and Digital Tracking

Another key observation in this study was privacy and digital tracking as a concern in the cyberbullying phenomenon. Victims' awareness of privacy and behaviour in the cyberworld may affect their safety in terms of personal data protection. As described in Yin and Raymond's cases, personal information for a victim can be found without a high computer skill requirement; digital tracking is one of the sources of information leakage (see p.124). The Phase Two findings also showed that Outing and Trickery were the third most common cyberbullying behaviours reported by the survey respondents (see Table 14 *Cyberbullying behaviours and Perpetrator rate*). This finding is consistent with Mascheroni and Ólafsson (2014) finding that half or more teenagers in Belgium, Ireland, Portugal and the UK do not manage their online privacy settings properly or disclose their personal information in a safe manner. Thus, anyone can make use of the personal

information leakage to disclose or attack a target victim. This greatly lowers the technical threshold to perform outing in cyberbullying. Therefore, privacy and digital tracking should be emphasised in preventing cyberbullying.

RQ2: What is the cyberbullying prevalence rate among Chinese young people?

Cyberbullying Prevalence Rate

The cyberbullying prevalence rate was measured by a self-developed multiple-item checklist based on the literature and Phase One findings (Appendix 11: Cyberbullying Behaviour Checklist). The self-developed instrument in this study can measure the victim and perpetrator scores which provide a reliable tool to measure the extent of cyberbullying (see p. 155). This helps to operationalise the construct of cyberbullying into a behaviour checklist that can be easier for the public to understand. This provides a good reference and measurement tool for further study of cyberbullying in Chinese society.

The Phase Two survey found that the cyberbullying prevalence rate reached 63.7% for perpetrators and 71% for victims (see p. 162). These results seem to be consistent with the latest local research which finds the victim prevalence rate to range from 12% to 72% (Chan & Wong, 2015). Comparing the prevalence rate with a meta study on 58 empirical researches on Cyberbullying in the US, the victim prevalence rate ranged from 3% to 72% (Selkie et al., 2016). Another study in six European countries found that the cyberbullying victim prevalence rate measured in the past 12 months was highest in Romania (37.3%) and lowest in Spain (13.3%) (Tsitsika et al., 2015). The low prevalence rate in the Europe study could be attributed to the use

of a single question in measuring cyberbullying: the instrument was less sensitive than a multiple-item checklist (Vaillancourt et al., 2010).

A possible explanation for the high prevalence rate in this study might be the popularity of social media and smartphones among young people. The smartphone penetration rate in Hong Kong and Macao is as high as 234% and 323% respectively (World Bank, 2015). Informed by the Phase One findings, social media was an important cyberbullying platform in four of the five case studies. This is consistent with the European Parliament study that cyberbullying is mostly done through mobile phones and social media (Virginia Dalla Pozza et al., 2016). Moreover, with technology advancement, computer software becomes more user friendly. High computer skill is no long a prerequisite to perform cyberbullying. In the Phase One interviews, Raymond and Ken described ways to perform "outing" and "impersonation" with basic computer techniques (see p. 106 and p.114). The techno subsystem enhances the ability of young people, but also facilitates young people to carry out aggressive behaviour in the cyberworld.

Considerable Cyberbullying is Observed Among Chinese Young People

This study confirms that cyberbullying is common among Chinese young people. The findings from the Phase One interviews showed that the behaviours mentioned in the literature are observed and valid in the Chinese community. Harassment, outing and trickery were the most common behaviours mentioned during the case interviews (see Table 5 *Cyberbullying behaviour observed among the cases*). Furthermore, the participants reported that cyberbullying was a collective action among their peers in some situations, and the group participation characteristic made cyberbullying increasingly commonplace among young people (see p. 121). The high cyberbullying prevalence rate is also evidence to support the idea that considerable cyberbullying

is obvious among Chinese young people (see Table 13 *Perpetrator and Victim Prevalence rate*). However, these findings may be somewhat limited by the non-probability sampling for this study. The result cannot provide generalisations for the whole population. Another source of uncertainty is that the study cannot cover all the cyberbullying behaviours in the fast-changing cyberworld.

RQ3: What are the significant factors affecting cyberbullying behaviour?

Ecological factors play an important role in young people's development (Bronfenbrenner & Morris, 2006; Swearer & Espelage, 2011). However, the findings from Phase Two could not demonstrate that the Microsystems have a significant influence on young people's cyberbullying behaviour in this cross-sectional study (see p. 167). Personal factors, including computer skills, social skills, socio-economic status and academic performance, had no correlation with cyberbullying. Personal factors such as gender, daily online hours and relationship with Microsystems showed a weak to moderate relationship with cyberbullying (Table 18 *Correlation table and descriptive statistics of variables*). However, when the personal factors were controlled for by statistical methods, the relationship with Microsystems was found not to be a significant factor contributing to cyberbullying (Table 19 *Stepwise regression analysis of Perpetrator Score*).

Fair Game for Everyone

One unexpected finding was that the young people's personal factors and relationship with Microsystems are not significant factor contributing to cyberbullying. The only dominating factor affecting the Perpetrator Score is the Victim Score and vice versa (see

Table 19). This result may be due to the nature of cyberworld: it is fair game for everyone. The cities involved in this study are well-developed and have good Internet coverage (WorldBank, 2015). The influences of personal skill and resources are minimised in comparison with the real world. Therefore, everyone offended by cyberbullying can fight back.

This result also accords with the Phase One finding, which showed that the role of young people in cyberbullying is complicated. In Yin and Zurg's cases, they performed aggressive behaviour to others, but they are also suffered from cyberbullying incidents. It is difficult to clearly define their roles in the incidents (see p. 103, p. 111). Furthermore, the anonymous nature of cyberbullying enables the perpetrators to hide their identity (Barlett, 2015). The cyberbullying victim can take revenge on the perpetrator by pretending to be another person in the cyberworld. The Phase Two survey also showed that the most selected reason (33.9% of cases) for cyberbullying is "To get revenge" (see Table 9 *Reasons for cyberbullying cross-tabulated tables by gender*). A possible explanation for this might be that young people's involvement in cyberbullying is dynamic in nature. The victim in one cyberbullying incident may be the perpetrator in another incident.

These findings are somewhat surprising, demonstrating that being a cyberbullying victim is significantly related to a person's own perpetrator behaviour and daily online time (p. 177), and is not related to their interaction in Microsystem and other personal factors. This result may be explained by the fact that the reason behind being a victim is the cyber behavioural pattern of the victim themselves. The victim in Raymond's case showed that a lack of awareness of personal privacy and posting inappropriate messages may attract attacks from the cyberworld (p. 114).

Gender Difference

The findings in Phase Two also demonstrated that there is a gender difference in cyberbullying behaviours, with statistically significant results indicating that males are more involved in cyberbullying (Table 19 *Stepwise regression analysis of Perpetrator Score*). A comparison with the findings for this study with those of other studies confirms that gender significantly affects perpetrator behaviour (Li, 2006; P. Smith et al., 2006): males have more chances to bully others in the cyberworld (p. 177).

Ecologically Meaningful

The magnitude of the correlation between ecological and personal factors and the extent of cyberbullying is not statistically significant in the survey study (see p. 167). On the other hand, Ken and Raymond described that cyberbullying was common among young people in their experience, and this was further confirmed by the quantitative findings that most of the survey respondents (71%) had encountered cyberbullying personally in the last year (see p. 162). These results support the idea that cyberbullying is a universal threat to young people, no matter what the difference in the ecological environment.

In the quantitative findings, family relationship, socio-economic status, age, personal skills and academic performance are independent of the extent of young people's cyberbullying experience apart from their behaviour pattern in the cyberworld (see p. 177). These results reflect the fact that cyberbullying is an unavoidable topic in digital life among young people. Everyone, no matter the variation in their age, social and economic status, skill and support network, has the same chance of being affected in the cyberworld; everyone is vulnerable in facing cyberbullying.

This also accords with Johnson (2010) idea about the importance of techno subsystems in the modern world. Technology enables young people to extend their connection outside the immediate Microsystems in their original ecological environment. The adapted ecological environment in Figure 3 shows the technology impacts on the young people's daily life. Similar to the 'person plus' concept suggested by Perkins (1993), the techno subsystem acts like a pair of glasses or a pair of shoes which can empower the young people to see far and walk further. Just likes a double-edged sword, it is a powerful weapon but also deadly for the user as well as others. Therefore, the techno subsystem is presented in Figure 3 as a layer between the young people and their immediate environment.

As mentioned before, the technical threshold is much lower with the new software and social media platforms. Young people can reach out to hundreds or thousands of people with a simple click through the techno subsystem. In the case interview, Raymond described a way to disclose the personal data of victims to thousands of people by simply copying and pasting into various popular forums in the cyberworld (see p. 114). The techno subsystem has empowered young people with better connections with other systems and enhanced the impact of their actions; it has also enlarged the harmful impacts of aggressive behaviour in cyberbullying. The self-documented and archived nature of social media further enhances the impacts and spreading of aggressive messages and results in a second harm to the victim (Wesler et al., 2008). Once the evil has been released, even the sender of the aggressive message can no longer control the flow of the message.

Although this study did not find any direct connection between cyberbullying and the immediate social environment, the ecological view of young people's reaction to cyberbullying is

still meaningful, especially in support and recovery after the cyberbullying incident. The discussion of Research Question 5 will give more detail on this aspect.

RQ4: What are the impacts of cyberbullying on young people?

Previous studies have reported that young people's psychological status has been affected by cyberbullying (J. Wang et al., 2011; Willard, 2007). Conflict in the cyberworld also affected the young people's daily life. Such bullying is not an incident in the virtual world only: two interview participants (Mary and Ken) expressed that they felt very unhappy about cyberbullying incidents and chose to skip school and pretend to be unwell to escape from the perpetrator (see pp. 98, 106). These findings are consistent with previous studies that school bullying is a strong predictor of cyberbullying (Li, 2007a; Li et al., 2011). Links between reality and the cyberworld were observed in the cyberbullying experience of the participants; interaction in the cyberworld is usually interconnected with young people's daily social relationships in the real world (p. 131). As the techno subsystem served as an important means of communication between young people and their peers on social media platforms, the conflict in the cyberworld was equal to the face-to-face conflict among their peer group. Mary's aggressive messages on social media were perceived as provocative responses to her friends and finally resulted in physical conflict (see p. 98). This demonstrates that the behaviour and communication in the cyberworld are not virtual but have real impacts on young people.

In Phase One of the study, the participants performing cyberbullying behaviour also felt bad about the conflict with their peers. However, these data must be interpreted with caution because some of the cyberbullying incidents happened well before the interview in terms of

months to years. The psychological status of a participant may not directly be related to the cyberbullying.

The Phase Two results were in line with the observations in the Phase One case study examples. The survey data revealed that there was a moderate positive correlation between cyberbullying and stress, anxiety and depression (p. 171). These findings provided additional evidence for the detrimental psychological impact on young people involved in cyberbullying. Moreover, the Perpetrator Score had a slightly stronger relationship with anxiety and depression than the Victim Score. In other words, the perpetrator suffers from a similar or higher level of anxiety and depression when compared to a victim (Table 20 *Psychological impacts correlation table and descriptive statistics of variables*). Taken together, the results from both phases showed that there was an association between cyberbullying and stress, anxiety and depression. It seems that perpetrators have the same psychological impacts as their victims.

These results are significant in the following aspects. Firstly, the impact of cyberbullying is confirmed. Professionals should take it seriously and handle the situation with care. Secondly, the difference between perpetrator and victim is blurred (see p. 129) and perpetrators may have a stronger service need because they are experiencing a severe psychological syndrome, as suggested by the findings in both phases of this study.

Moreover, the Phase One interviews showed that cyberbullying victims may change their attitude and choose to become a perpetrator in the next cyberbullying incident (see p. 135). Bronfenbrenner (2005) suggests young people's interaction with the ecological system will affect their development. This is a proximal process in ecological system theory. In the Phase One case studies, the stories of cyberbullying victims provide a good illustration of this theory. Cyberbullying and conflict are proximal processes and foster the victim to become more

aggressive and no longer trust others. The findings in Phase Two further supported this observation as revenge is one of the main reasons for young people to bully others in the cyberworld (see p. 160). However, this study has been unable to demonstrate that young people's relationship with Microsystems contributes to their cyberbullying behaviour (see p. 177).

Besides this, young people will learn from cyberbullying incidents to raise their awareness of privacy to protect themselves in the cyberworld (see p. 114). Their experiences reminded them to be more concerned about digital traces left on social media and account privacy settings (p. 124).

Chapter Seven : Implications and Conclusions

This chapter outlines the implications of the current study. The key contributions and implications are presented. This is important for designing supportive services for young people being affected by cyberbullying. There are some implications for further study, and finally, several limitations which should also be considered in examining the study results.

Key Contributions of this Study

Before this study, research examining cyberbullying in China was mainly quantitative in nature. The importance and originality of this study is that it explores cyberbullying using mixed methods in Southern China. The current study provides a comprehensive exploration of the cyberbullying phenomenon in Hong Kong, Macao and Guangzhou. Moreover, the timeline drawings adopted in the qualitative interview demonstrated a feasible method for visualising the social relationships and time sequencing details in cyberbullying (Freeman, 2000; Hall et al., 2002). The current study makes an original contribution to cyberbullying research methods that show the stages of cyberbullying development. This provides a new insight into the stages of cyberbullying development process through the case analysis and survey. The three cyberbullying stages described in this study can facilitate further study on the process of cyberbullying development. Moreover, the ecological perspective with the integrated Techno subsystem provides an all-inclusive framework to analyse cyberbullying among young people. All the qualitative findings provide an in-depth illustration of a local cyberbullying phenomenon.

Although no evidence has been found for the ecological influence on young people's cyberbullying behaviour in this study, the Microsystem, especially family and school, showed a

significant role in helping young people to recover from cyberbullying incidents in the Phase One case interviews. The Techno subsystem further expands the ecological environment of young people to a wider horizon, giving both risks and opportunities to the next generation (Johnson, 2010).

Another strength of this study is the provision of a cyberbullying behaviour checklist and ten types of cyberbullying behaviour in the Chinese context. The cyberbullying Perpetrator Score and Victim Score proved to be an appropriate instrument for measuring cyberbullying among Chinese young people. This is useful for further assessing and monitoring the cyberbullying prevalence rate and provides warning signals for our society. Although the cyberbullying prevalence in the three cities are different, the factors correlated with cyberbullying are almost the same among the cities. The multi-level modelling analysis of the three cities' data showed no significant difference among the factors predicting cyberbullying. The findings of this research support the idea that cyberbullying is a global phenomenon; country variations in contributing factors are not obvious.

The most important points are the practice implication of this study. It was the researcher's experience of working with young people that drove this research. As a social worker and researcher, the rich information obtained from the cyberbullying cases enriched our understanding of the phenomenon. The help-seeking behaviour informed the NGO in designing supportive service for young people being affected by cyberbullying incidents. Strong evidence form the case interviews showed that teachers' and parents' awareness of cyberbullying are limited. More training and support are required to enhance teachers' and parents' skill to identify and handle cyberbullying. The findings should make an important contribution to the helping profession to serve needy young people around cyberbullying.

Suggestions for Future Study

Despite the promising results from the case interviews and survey, questions remain. Five directions can be suggested for further study on this topic. Firstly, more cyberbullying case studies from different cities are recommended. The interviews for the five Hong Kong cyberbullying cases provided an invaluable illustration of cyberbullying from the young people's perspective in this study. However, due to the complexity and fast-changing nature of cyberbullying, there is a need for more cases from different cities and detailed narrative accounts of incidents to develop a full picture of cyberbullying in Chinese society.

Second, teachers' and parents' attitude to and awareness of cyberbullying can be further explored; the collected data shows that school teachers, parents and social workers may underestimate the impact of cyberbullying on young people. This observation echoes Graham (2011) view that the digital divide is shifting from basic Internet access to a knowledge divide. The digital native generation masters skills in social media and the cyberworld much better than adults (Bennett et al., 2008). A knowledge divide concerning digital technology may be appearing between the adult and younger generation, not just in terms of resources or access to ICT, but usage and integration between the cyberworld and the immediate ecological environment. As reflected in the qualitative case study result, professionals may not be familiar with performing their role in an online environment. This is an important issue for future research on teachers' and social workers' awareness of cyberbullying and their response to provide timely support for young people in the cyberworld.

Third, the role and effectiveness of protective factors such as family, school and helping professions can be explored to maximise the support for young people experiencing cyberbullying.

In this study, both the case study and survey results pointed out the importance of family support in helping young people to recover from cyberbullying. These results are consistent with previous studies on the protective functions of the family (Hinduja & Patchin, 2010b; Hoff & Mitchell, 2009). More research needs to be undertaken in this area to demonstrate the protective and supportive function of families and schools in cyberbullying incidents.

Fourth, another study suggestion is around the gender difference in cyberbullying. Females were found to carry out less cyberbullying behaviour and be victims in this study. However, previous studies claim that girls may be more involved in indirect or relational cyberbullying (Smith et al., 2008; Thorp, 2004). The qualitative findings of this study echoed the quantitative result and Smith's observation. However, the number of case interviews in this study was limited, and a more in-depth study on female involvement in cyberbullying is recommended.

Fifth, a longitudinal study on cyberbullying development is recommended. This study claims that cyberbullying is a process that develops over time, suggesting three stages illustrate conflict development in the cyberworld. However, only preliminary and superficial data was collected in this study. The cyberbullying process can be better recorded and studied in a longitudinal study. This could provide more empirical data to clearly define every stage in cyberbullying. Moreover, the existing research design could not discover the reason behind cyberbullying. This is because a cross-sectional study cannot provide any evidence for a causal relationship among cyberbullying and the factors examined (Creswell, 2013). For example, the Phase Two results can only illustrate the correlation between cyberbullying and psychological impacts. We cannot tell if cyberbullying induces stress and anxiety or whether the psychological problems cause cyberbullying. Although the qualitative study can supplement the time influence by the participant's description of their cyberbullying experience some years ago, the illustration

may be distorted for the long-time period. The time factor is an important element suggested in ecological system theory, but the existing research design could not measure the time impacts on cyberbullying, so a longitudinal study on cyberbullying cases is suggested for better observation.

Ultimately, there is room to further explore the social phenomena by using big data. The McKinsey Global Institute defines big data as "datasets whose size is beyond the ability of typical database software tools to capture, store, manage, and analyse" (Manyika et al., 2011). In short, it is a new research technique to study a whole population instead of a selected sample. Cyberbullying involves online social interaction, and all the activities are logged and stored in the computer servers of social media platforms. Big data includes both structured data and unstructured data, such as emails, posts on social media, chat records, videos, music, and machine-generated computer server logs (M. Chen, Mao, & Liu, 2014). The digital traces and digital ghosts mentioned previously actually form a portion of the big data (Jacovi et al., 2011; Steinhart, 2014). It is possible to capture all social interactions in cyberspace using existing technology. This provides a new tool in predictive and behaviour analytics. However, there are still challenges in ethics and privacy, as well as technical problems in identifying and capturing a huge volume of data (boyd & Crawford, 2012). Although social media data is public already, there is a lack of informed consent to notify and get consent from the research subjects, which breaches research ethics (Zwitter, 2014). Further discussion on this aspect is necessary.

Implications for the Helping Professions

The goal of this study is inducing transformative change in our society to provide better support for young people involved in cyberbullying. In order to achieve the goal, the researcher and involved NGOs were interested in the practical applications of the study results. Furthermore,

the results also provide insights for service development and for increasing understanding about cyberbullying in Chinese society.

The first implication for service is the need for more education and training to boost the sensitivity and awareness of social workers, parents and teacher about cyberbullying incidents. Although this study's results and previous studies support that cyberbullying is affecting the psychological health of young people (Bauman et al., 2013; Campbell et al., 2013; Gámez-Guadix et al., 2013; Hinduja & Patchin, 2010a), the Phase One case interviews showed that teachers' sensitivity in handling cyberbullying incidents was inadequate. Professional training and workshops for school and social service organisations may provide more up-to-date information to extend their service arm for needy young people involved in cyberbullying.

The second implication is the need to review the design of existing support services in schools and communities. The existing service design may not be effective in helping young people suffering from cyberbullying. It was clearly stated in Ken's cases that the teachers were hesitant to handle the conflict in the cyberworld, although Ken reported it to the school. The existing support system was more concerned about the conflict in the physical world, Mary's conflict with her peers last for several months without any concern from school until the conflict surfaced in the community. The findings of the Phase One study claimed that the reality of young people's lives is intertwined with the cyberworld as well as the physical world. Ken further emphasised that his feelings of hurt from the cyberworld were more serious than his physical hurt. These findings agreed with the Phase Two survey that young people prefer to seek help from peers (54.6%) or fix the problem by themselves (49.8%) in cyberbullying incidents (p. 161). The results from both phases were consistent with the literature that peer support is the most immediate help sought by young people in the case of cyberbullying (Juvonen & Gross, 2008; Stone, 2014). This

suggests the existing supportive services' publicity and connections with youth should be enhanced. As reflected in Ken and Mary's cases, parents played a key role in helping their children, but their low awareness delayed the intervention until the later stage of cyberbullying. More information and resources are needed for parents to enhance their awareness and ability to help their children in need. For the peer system, peer helper or mentor programmes may be more effective to connect with at-risk young people in combating cyberbullying (Banerjee, Robinson, & Smalley, 2010; Bhat, 2008). All of the above measures are in accord with the ecological system theory that the Microsystems, including family, school and peers, play a significant role for young people (Bronfenbrenner, 2009). Supportive measures in enhancing those systems' ability in identifying and handling cyberbullying are recommended for local helping professions.

The third implication is for the target client group in cyberbullying incident. The supportive service should be extended to all young people involved in cyberbullying incidents instead of just the victims. This study shows that the line between perpetrator and victim is blurred in cyberbullying, and perpetrators suffer from higher levels of stress and anxiety (p. 171); everyone is the victim in cyberbullying incidents. The target client group of related supportive services should cover all young people involved in cyberbullying.

Another insight from the findings is the escalation of cyberbullying identified in the Phase One study: the intensity and level of cyberbullying increase along the conflict development stages (see p. 119). This echoes ecological system theory that the time factor (Chronosystem) has an impact on young people as well as the cyberbullying incident (Bronfenbrenner, 2009). Cyberbullying may start from verbal conflict or a trivial issue; playfulness may be one of the motives at the beginning of the incident instead of hurting the victim. As stated in previous studies, if the conflict can be identified in its early stage, it is more possible to stop the conflict and

minimise the impacts on young people (Feinberg & Robey, 2009; Roberge, 2012). Early identification of cyberbullying incidents may be another direction for social service providers and schools. Moreover, more public education on cyberbullying may enhance young people's awareness of their 'For fun' action's harm to the victim. An implication of this is the possibility that unintentional cyberbullying can be reduced via more educational programmes on cyberbullying. Moreover, in-service training for school teachers and social workers to enhance their skill in handling cyberbullying cases is recommended.

Limitations

In this study, identifying and contacting the young people involved in cyberbullying was not an easy task. Only limited cyberbullying cases were interviewed. Searching for appropriate NGOs with connections with those young people as research partners was difficult due to the sensitive and hidden nature of cyberbullying. Although the researcher's prior experience in bullying and social service networks with the NGOs in Hong Kong, Macao and Guangzhou provided a good foundation for this study, a great deal of networking and liaising had to be done before the study could begin. In order to seek the NGOs' support in this study, a research proposal and documentation of the worth of the study were prepared and presented to potential NGOs. In addition, individual reports on the respective cities were provided for the involved NGOs for their service and strategy service planning in their local city. The long liaison period and the extra workload increased the difficulty for the researcher to conduct more in-depth interviews in the cities involved. With all the effort mentioned above, only five Hong Kong cyberbullying cases

were interviewed in this study. The small number of case interviews and the cases confined to one city affected the transferability of the study findings (Denzin & Lincoln, 2011; Glesne, 2016).

Another problem was the conflicting ideology, the mixed methods design needed to deal with the conflicting ideology and the analysis of the quantitative and qualitative data, so it was difficult to figure out consensus and conclusions to satisfy both ideological camps (Johnson & Onwuegbuzie, 2004). Furthermore, the mixed methods design requires the researcher to equip themselves with both quantitative and qualitative techniques. The extra workload may impose another difficulty to the study (Creswell, 2013). The suggested two-phase mixed methods in this study helped to facilitate the researcher to complete the study phase by phase.

In the Phase One study, the interviews were not accomplished immediately after the cyberbullying incidents. The participants may have had errors of memory or missing details in reviewing their previous cyberbullying experiences some months or years ago. Also, the interview participants did not know the researcher before the interview, so their level of trust was mainly reliant on the social worker. In the Phase Two survey, there were several limitations. The two main limitations were acknowledged in the study design: the reliability and validity of self-developed instruments, and the non-probability sampling nature of the Phase Two survey. Therefore, the results from this study cannot be generalised to the whole population. The limitation is partly compensated by adopting multiple methods of data collection in the mixed research design. Moreover, the use of triangulation and factor analysis can help to minimise potential biases and address the reliability and validity issues of this study.

Another limitation is cultural and policy differences. The cultural difference between the three cities resulted in slightly different patterns in language usage, such as traditional and

simplified Chinese, so the researcher mailed the draft questionnaire to the research partners and sought their comments before data collection.

One of the major limitations of this study is that the sampling cannot fully represent the population. The credibility and reliability can be further enhanced using triangulation, increasing the sample size and employing more purposive sampling techniques. Generally, the study is still useful as it can reveal the relationship of various personal attitudes, psychological factors and cyberbullying.

Recommendation

Support and Help

The Phase One findings showed the positive role of family, school and community for helping young people in cyberbullying incidents (Mary and Ken, see p. 98). These results are in agreement with the literature (Hinduja & Patchin, 2010b; Hoff & Mitchell, 2009). Even though the Phase Two survey reflected the fact that ecological factors cannot help young people to escape from the danger of cyberbullying, as no significant correlations were found between ecological factors and the respondents' cyberbullying experiences (see p. 177), it is encouraging to find that family relationship played a positive role in helping young people to overcome and recover from cyberbullying incidents. In the Phase One study, Mary, Yin and Zurg escaped from cyberbullying with help from family and social workers (see p. 136). The Phase Two findings further supported this observation: 39.1% of the respondents would seek help from a family member in cyberbullying incidents (see p. 161). Parents and family members are higher priority than professionals such as teachers, social workers and police when seeking help with cyberbullying. This study produced results which corroborate the findings of Espelage (2014): family support can

help to buffer the negative impact of bullying. A note of caution is due here: since the nature of qualitative interviews and the survey sample in this study did not come from probability sampling, the results cannot make inferences or be generalised to an entire population. It should also be remembered that there could be a number of factors influencing cyberbullying that were not included in this study.

Everyone is a Victim in Cyberbullying

Previous studies emphasise the imbalance of power in cyberbullying, which implies that there is a clear role difference between victim and perpetrator (Kowalski et al., 2014; Olweus, 2013; Smith et al., 2008; Tokunaga, 2010). However, this study did not find significant differences between victims and perpetrators in cyberbullying. The case interviews revealed that victims also acted as perpetrators in cyberbullying incidents. The Phase One interviews thus identified role diffusion between victims and perpetrators; it is difficult to clearly define the role of the players in cyberbullying (p. 129). The interview participants reported that the victim in one cyberbullying incident may be the perpetrator in another incident (Zurg). The quantitative findings were consistent with the qualitative results. The extent of being cyberbullied (Victim Score) and extent of cyberbullying (Perpetrator Score) were statistically significantly highly correlated (see p. 168). This indicates that the respondents were involved as victims as well as perpetrators to some extent.

This has been further supported in the survey findings, where “To get revenge” was selected by perpetrators (33.9%) as the main reason for cyberbullying (p. 160). It is encouraging to find that these results are in agreement with boyd (2014) understandings of cyberbullying: the

power imbalance is not common in cyberbullying because young people will fight back, a victim will defend themselves and seek revenge.

One unexpected finding was the main character changing in cyberbullying incidents. Since the first study on online harassment (Finkelhor et al., 2000), victimisation has been the focus of cyberbullying studies (L. Chen, Ho, & Lwin, 2016; Rivituso, 2014; Tokunaga, 2010; Tsitsika et al., 2015). However, the evidence presented in both phases of this study thus far supports the idea that "Everyone is a victim in cyberbullying". The results from this study showed that everyone involved in cyberbullying was a victim, with different degrees of hurt and impacts observed among young people.

Concluding Remarks

As the findings and discussion of this study suggest, cyberbullying is not old wine in a new bottle. The new technology is affecting the whole ecological environment of our society as well as young people's social interactions. Young people can reach out to the originally unreachable Exosystem and Macrosystem, and so their actions has higher impacts than before.

Bullying has become more complicated in the cyberworld: its impacts and influence are further enhanced by new technology. Social media and the Internet have become another open space in young people's daily lives. Ever-changing communication technology provides new connecting power and challenges for our young people and social service providers. Cyberbullying is one of the social phenomena arising as society moves forward: a new challenge that must be addressed by a new definition and mind-set for our digital native generation.

References

Agatston, P. W., Kowalski, R., & Limber, S. (2007). Students' perspectives on cyber bullying. *Journal of Adolescent Health, 41*(6), S59-S60.

Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Psychology, 53*(1), 27.

Antti, K., Voeten, M., Poskiparta, E., & Salmivalli, C. (2010). Vulnerable children in varying classroom contexts: Bystanders' behaviors moderate the effects of risk factors on victimization. *Merrill-Palmer Quarterly, 56*(3), 261-282.

APA. (2010). *Ethical principles of psychologists and code of conduct*: American Psychological Association.

Athanasiades, C., Kamariotis, H., Psalti, A., Baldry, A. C., & Sorrentino, A. (2015). Internet use and cyberbullying among adolescent students in Greece: The "Tabby" project. *Hellenic Journal of Psychology, 12*, 14-39.

Bagnoli, A. (2009). Beyond the standard interview: The use of graphic elicitation and arts-based methods. *Qualitative research, 9*(5), 547-570.

Bakija, J. (2013). A Non-Technical Introduction to Regression. *Williams College*.

Balakrishnan, V. (2015). Cyberbullying among young adults in Malaysia: The roles of gender, age and Internet frequency. *Computers in human behavior, 46*, 149-157. doi:10.1016/j.chb.2015.01.021

Banerjee, R., Robinson, C., & Smalley, D. (2010). Evaluation of the Beatbullying peer mentoring programme. *Report for Beatbullying. University of Sussex*.

Barlett. (2015). Predicting adolescent's cyberbullying behavior: A longitudinal risk analysis. *Journal of adolescence, 41*, 86-95. doi:10.1016/j.adolescence.2015.02.006

Barlett, Gentile, D. A., Anderson, C. A., Suzuki, K., Sakamoto, A., Yamaoka, A., & Katsura, R. (2014). Cross-cultural differences in cyberbullying behavior a ahort-term longitudinal study. *Journal of Cross-Cultural Psychology, 45*(2), 300-313.

Bauman, S. (2010). Cyberbullying in a rural intermediate school: An exploratory study. *The Journal of Early Adolescence, 30*(6), 803-833.

Bauman, S., Toomey, R. B., & Walker, J. L. (2013). Associations among bullying, cyberbullying, and suicide in high school students. *Journal of adolescence, 36*(2), 341-350.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497.

Bennett, S., Maton, K., & Kervin, L. (2008). The 'digital natives' debate: A critical review of the evidence. *British Journal of Eucational Technology, 39*(5), 775-786.

Beran, T., & Li, Q. (2008). The relationship between cyberbullying and school bullying. *The Journal of Student Wellbeing, 1*(2), 16-33.

Beringer, A. (2011). Teacher's perceptions and awareness of cyberbullying among middle school students. *Counselor Education, Fall 2011*.

Berne, S., Frisén, A., Schultze-Krumbholz, A., Scheithauer, H., Naruskov, K., Luik, P., . . . Zukauskiene, R. (2013). Cyberbullying assessment instruments: A systematic review. *Aggression and Violent Behavior, 18*(2), 320-334.

Bhat, C. S. (2008). Cyber bullying: Overview and strategies for school counsellors, guidance officers, and all school personnel. *Journal of Psychologists and Counsellors in Schools, 18*(1), 53-66.

Bird, C. M. (2005). How I stopped dreading and learned to love transcription. *Qualitative Inquiry, 11*(2), 226-248.

boyd, D. (2014). *It's complicated: The social lives of networked teens*: Yale University Press.

boyd, D., & Crawford, K. (2012). Critical questions for big data: Provocations for a cultural, technological, and scholarly phenomenon. *Information, communication & society, 15*(5), 662-679.

boyd, D., & Marwick, A. (2011). Bullying as true drama. *The New York Times, 22*.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

British Psychological Society, B. (2010). Code of Human Research Ethics [online]. Retrieved from http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental psychology, 22*(6), 723.

Bronfenbrenner, U. (1997). Ecological models of human development. *Readings on the development of children, 1993*, 37-43.

Bronfenbrenner, U. (2005). *Making human beings human: Bioecological perspectives on human development*: Sage.

Bronfenbrenner, U. (2009). *The ecology of human development: Experiments by nature and design*: Harvard University Press.

Bronfenbrenner, U., & Morris, P. A. (2006). *The bioecological model of human development*: John Wiley & Sons, Inc.

Buckner, H. T. (1965). A theory of rumor transmission. *Public Opinion Quarterly, 29*(1), 54-70.

Calvete, E., & Orue, I. (2011). The impact of violence exposure on aggressive behavior through social information processing in adolescents. *American Journal of Orthopsychiatry, 81*(1), 38.

Campbell, M. A., Slee, P. T., Spears, B., Butler, D., & Kift, S. (2013). Do cyberbullies suffer too? Cyberbullies' perceptions of the harm they cause to others and to their own mental health. *School psychology international, 34*(6), 613-629.

Carter, K. (1993). The place of story in the study of teaching and teacher education. *Educational researcher, 22*(1), 5-18.

Chan, H. C. O., & Wong, D. S. (2015). Traditional school bullying and cyberbullying in Chinese societies: Prevalence and a review of the whole-school intervention approach. *Aggression and Violent Behavior, 23*, 98-108.

Chase, S. E. (2007). Multiple lenses, approaches, voices. *Collecting and interpreting qualitative materials, 57*(3), 651-679.

Chen, L., Ho, S. S., & Lwin, M. O. (2016). A meta-analysis of factors predicting cyberbullying perpetration and victimization: From the social cognitive and media effects approach. *new media & society, 1*, 20.

Chen, M., Mao, S., & Liu, Y. (2014). Big data: a survey. *Mobile Networks and Applications, 19*(2), 171-209.

China. (1990). *The Basic Law of the Hong Kong Special Administrative Region of the People's Republic of China*. People's Republic of China.

China. (1993). *Basic Law of the Macao Special Administrative Region of the People' s Republic of China*. People' s Republic of China Retrieved from http://bo.io.gov.mo/bo/i/1999/leibasica/index_uk.asp.

China. (1997). *计算机信息网络国际联网安全保护管理办法（公安部令第 33 号）Measures for Security Protection Administration of the International Networking of Computer*

Information Networks. (Approved by the State Council on December 11, 1997 and promulgated by Decree No. 33 of the Ministry of Public Security on December 16, 1997) Retrieved from http://www.mps.gov.cn/n2254314/n2254409/n2254443/n2254451/c4113546/content.html.

China. (2017). *《中華人民共和國國民經濟和社會發展第十三個五年規劃綱要》The 13th Five-Year Plan for the National Economic and Social Development of the The People's Republic of China*. Hong Kong Retrieved from http://www.cmab.gov.hk/tc/issues/bay_area.htm.

Chui, W. H. (2001). Users' views of an outreaching social work team in Hong Kong. *International Social Work, 44*(4), 455-469.

Chui, W. H., & Chan, H. C. O. (2012). Outreach social workers for at-risk youth: A test of their attitudes towards crime and young offenders in Hong Kong. *Children and Youth Services Review, 34*(12), 2273-2279.

Coburn, C. E., Penuel, W. R., & Geil, K. E. (2013). Research practice partnerships: A strategy for leveraging research for educational improvement in school districts. *William T. Grant Foundation*.

Coghlan, D. (2003). Practitioner research for organizational knowledge: Mechanistic-and organistic-oriented approaches to insider action research. *Management Learning, 34*(4), 451-463.

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*: Routledge.

Coleman, J., & Hagell, A. (2007). *Adolescence, risk and resilience: Against the odds* (Vol. 3): John Wiley & Sons.

Connelly, F. M., & Clandinin, D. J. (1990). Stories of experience and narrative inquiry. *Educational researcher, 19*(5), 2-14.

Cooper, G. (2012, 12 Apr 2012). Sexting: a new teen cyber-bullying 'epidemic'. *The Telegraph*. Retrieved from http://www.telegraph.co.uk/technology/facebook/9199126/Sexting-a-new-teen-cyber-bullying-epidemic.html

Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches* (Third Edition ed.): Sage.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage.

Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*: Wiley Online Library.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika, 16*(3), 297-334.

Cross, D., Barnes, A., Papageorgiou, A., Hadwen, K., Hearn, L., & Lester, L. (2015). A social–ecological framework for understanding and reducing cyberbullying behaviours. *Aggression and Violent Behavior, 23*, 109-117.

Darren, G., & Mallery, P. (1999). SPSS for Windows step by step: A simple guide and reference: Needham Heights, MA: Allyn & Bacon.

De Leeuw, E. D., & Dillman, D. A. (2008). *International handbook of survey methodology*: Taylor & Francis.

Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research*: Sage.

Dewey, J. (1986). *Experience and education.* Paper presented at the The Educational Forum.

Dooley, J. J., Pyżalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying: A theoretical and conceptual review. *Zeitschrift für Psychologie/Journal of Psychology, 217*(4), 182-188.

Drew, C. J., Hardman, M. L., & Hosp, J. L. (2008). *Designing and conducting research in education*: Sage.

Erikson, E. H. (1993). *Childhood and society*: WW Norton & Company.

Espelage, D. L. (2014). Ecological theory: Preventing youth bullying, aggression, and victimization. *Theory into Practice, 53*(4), 257-264.

Facebook. (2016). Facebook Help Centre, Creating Your New Account. Retrieved from https://en-gb.facebook.com/help/345121355559712

Feinberg, T., & Robey, N. (2009). Cyberbullying: Intervention and prevention strategies. *National Association of School Psychologists, 38*(4), 22-24.

Ferguson, C. J., & Dyck, D. (2012). Paradigm change in aggression research: The time has come to retire the General Aggression Model. *Aggression and Violent Behavior, 17*(3), 220-228.

Field, A. (2009). *Discovering statistics using SPSS*: Sage publications.

Finkelhor, D., Mitchell, K. J., & Wolak, J. (2000). *Online Victimization: A Report on the Nation's Youth*. Retrieved from US:

Freeman, L. C. (2000). Visualizing social networks. *Journal of social structure, 1*(1), 4.

Furr, M. (2011). *Scale construction and psychometrics for social and personality psychology*: SAGE Publications.

Gámez-Guadix, M., Orue, I., Smith, P. K., & Calvete, E. (2013). Longitudinal and reciprocal relations of cyberbullying with depression, substance use, and problematic internet use among adolescents. *Journal of Adolescent Health, 53*(4), 446-452.

Görzig, A., & Ólafsson, K. (2013). What makes a bully a cyberbully? Unravelling the characteristics of cyberbullies across twenty-five European countries. *Journal of Children and Media, 7*(1), 9-27.

Garland, A. F., Plemmons, D., & Koontz, L. (2006). Research–practice partnership in mental health: Lessons from participants. *Administration and Policy in Mental Health and Mental Health Services Research, 33*(5), 517-528.

Gass, R. (2010). *Farming deep change : essay on transformative social change* Centre for transformative change.

Glesne, C. (2016). *Becoming qualitative researchers: An introduction* (5 ed.): Pearson.

Google. (2013). 2013 Our Mobile Planet : Hong Kong. Retrieved from http://www.thinkwithgoogle.com/mobileplanet/zh-hk/

Graham, M. (2011). Time machines and virtual portals: The spatialities of the digital divide. *Progress in Development Studies, 11*(3), 211-227.

Granovetter, M. (1976). Network sampling: Some first steps. *American Journal of Sociology, 81*(6), 1287.

Gray, D. E. (2013). *Doing research in the real world*: Sage.

Greenberg, M. A., Wortman, C. B., & Stone, A. A. (1996). Emotional expression and physical heath: Revising traumatic memories or fostering self-regulation? *Journal of Personality and Social psychology, 71*(3), 588.

Greene, J. C., Benjamin, L., & Goodyear, L. (2001). The merits of mixing methods in evaluation. *Evaluation, 7*(1), 25-44.

Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational evaluation and policy analysis, 11*(3), 255-274.

Grigg, D. W. (2010). Cyber-aggression: Definition and concept of cyberbullying. *Australian journal of Guidance and Counselling, 20*(02), 143-156.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research, 2*(163-194), 105.

Gutek, G. L. (2013). *Philosophical, ideological, and theoretical perspectives on education*: Pearson Higher Ed.

Hall, T. M., Kaduson, H. G., & Schaefer, C. E. (2002). Fifteen effective play therapy techniques. *Professional Psychology: Research and Practice, 33*(6), 515.

Hamburger, M. E., Basile, K. C., & Vivolo, A. M. (2011). *Measuring bullying victimization, perpetration, and bystander experiences: A compendium of assessment tools*: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Division of Violence Prevention.

Hammersley, M. (2000). Taking sides in social research: London: Routledge.

Hanson, W. E., Creswell, J. W., Clark, V. L. P., Petska, K. S., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of counseling psychology, 52*(2), 224.

Harasymiw, T. (2012). *Cyberbullying and the Law*: The Rosen Publishing Group.

Hargittai, E. (2010). Digital na (t) ives? Variation in internet skills and uses among members of the "net generation". *Sociological inquiry, 80*(1), 92-113.

Hargittai, E., & Shafer, S. (2006). Differences in actual and perceived online skills: The role of gender. *Social Science Quarterly, 87*(2), 432-448.

Hawker, D. S., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: a meta‐analytic review of cross‐sectional studies. *Journal of Child Psychology and Psychiatry, 41*(4), 441-455.

Hesse-Biber, S. (2010). Qualitative approaches to mixed methods practice. *Qualitative Inquiry*.

Hinduja, S., & Patchin, J. (2013). Social Influences on Cyberbullying Behaviors Among Middle and High School Students. *Journal of youth and adolescence, 42*(5), 711-722. doi:10.1007/s10964-012-9902-4

Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant behavior, 29*(2), 129-156.

Hinduja, S., & Patchin, J. W. (2010a). Bullying, cyberbullying, and suicide. *Archives of Suicide Research, 14*(3), 206-221.

Hinduja, S., & Patchin, J. W. (2010b). Sexting: a brief guide for educators and parents. *Cyberbullying Research Center*.

HKFYG. (2010). *A Study on Cyber-bullying among Hong Kong Secondary Students*. Retrieved from Hong Kong: hkfyg.org.hk

HKPA. (2008). *Hong Kong Playground Association Annual Report 2008*. Retrieved from Hong Kong: www.hkpa.hk

HKPA. (2012). *Hong Kong Playground Association Annual Report 2012*. Retrieved from Hong Kong: www.hkpa.hk

HKPA. (2015). *Hong Kong Playground Association Annual Report 2015*. Retrieved from Hong Kong: www.hkpa.hk

Hoff, D. L., & Mitchell, S. N. (2009). Cyberbullying: Causes, effects, and remedies. *Journal of Educational Administration, 47*(5), 652-665.

Holfeld, B., Grabe, M., Li, Q., Cross, D., & Smith, P. K. (2012). *An examination of the history, prevalence, characteristics, and reporting of cyberbullying in the United States*. US: Wiley Blackwell.

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior, 17*(4), 311-322.

Hong Kong Law Chapter 486 : Personal Data (Privacy) Ordinance, (2013).

Hong Kong. (2017). Overnight Outreaching Service for Young Night Drifters. Retrieved from http://www.swd.gov.hk/en/index/site_pubsvc/page_young/sub_seryouthrisk/id_overnighto/

Hong Kong Council of Social Service. (1988). *Operation Manual for Outreaching Social Workers*. Retrieved from Hong Kong:

Howison, J., Wiggins, A., & Crowston, K. (2011). Validity issues in the use of social network analysis with digital trace data. *Journal of the Association for Information Systems, 12*(12), 767.

Huang, Y.-y., & Chou, C. (2010). An analysis of multiple factors of cyberbullying among junior high school students in Taiwan. *Computers in human behavior, 26*(6), 1581-1590.

Hudson, L. A., & Ozanne, J. L. (1988). Alternative ways of seeking knowledge in consumer research. *Journal of consumer research, 14*(4), 508-521.

Instagram. (2016). Creating an Account & Username - Instagram Help Center. Retrieved from https://help.instagram.com/1642053262784201/

International Federation of Social Workers. (2014). Global Definition of Social Work. Retrieved from http://ifsw.org/get-involved/global-definition-of-social-work/

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods, 18*(1), 3-20.

Jacovi, M., Guy, I., Ronen, I., Perer, A., Uziel, E., & Maslenko, M. (2011). *Digital traces of interest: Deriving interest relationships from social media interactions.* Paper presented at the ECSCW 2011: Proceedings of the 12th European Conference on Computer Supported Cooperative Work, 24-28 September 2011, Aarhus Denmark.

Jick, T. D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative science quarterly*, 602-611.

Johnson. (2010). Internet use and child development: Validation of the ecological techno-subsystem. *Journal of Educational Technology & Society, 13*(1), 176-185.

Johnson, & Christensen, L. (2012). *Educational research: Quantitative, qualitative, and mixed approaches*: Sage.

Johnson, & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher, 33*(7), 14-26.

Johnson, H. J. (2012). *Cyberbullying issues in schools: an exploratory, qualitative study from the perspective of teaching professionals.* University of Birmingham.

Joinson, A. N. (2003). Understanding the psychology of Internet behaviour: Virtual worlds, real lives. *Revista iberoamericana de educación a distancia, 6*(2), 190.

Jones-Kavalier, B. R., & Flannigan, S. I. (2008). Connecting the digital dots: Literacy of the 21st century. *Teacher Librarian, 35*(3), 13.

Jovchelovitch, S., & Bauer, M. W. (2000). *Narrative interviewing*. England: SAGE Publications.

Juvonen, J., & Gross, E. F. (2008). Extending the school grounds? Bullying experiences in cyberspace. *Journal of school health, 78*(9), 496-505.

König, A., Gollwitzer, M., & Steffgen, G. (2010). Cyberbullying as an Act of Revenge? *Australian journal of Guidance and Counselling, 20*(02), 210-224.

Kaiser, H. F. (1974). An index of factorial simplicity. *psychometrika, 39*(1), 31-36.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons, 53*(1), 59-68.

Keith, S., & Martin, M. E. (2005). Cyber-bullying: Creating a culture of respect in a cyber world. *Reclaiming children and youth, 13*(4), 224-228.

Kosinski, M., Stillwell, D., & Graepel, T. (2013). Private traits and attributes are predictable from digital records of human behavior. *Proceedings of the National Academy of Sciences, 110*(15), 5802-5805.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the Digital Age: A Critical Review and Meta-Analysis of Cyberbullying Research Among Youth. *Psychological bulletin*.

Kowalski, R. M., Limber, S., Limber, S. P., & Agatston, P. W. (2012). *Cyberbullying: Bullying in the digital age*: John Wiley & Sons.

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *Journal of Adolescent Health, 41*(6), S22-S30.

Kvale, S. (2008). *Doing interviews*: Sage.

Kwan, G. C. E., & Skoric, M. M. (2013). Facebook bullying: An extension of battles in school. *Computers in human behavior, 29*(1), 16-25.

Landreth, G. L. (2012). *Play therapy: The art of the relationship*: Routledge.

Lee, C.-H. (2010). An ecological systems approach to bullying behaviors among middle school students in the United States. *Journal of interpersonal violence, XX(X)*. doi:10.1177/0886260510370591

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., & Rainie, L. (2011). Teens, Kindness and Cruelty on Social Network Sites: How American Teens Navigate the New World of "Digital Citizenship". *Pew Internet & American Life Project*.

Leung, & McBride-Chang, C. (2013). Game on? Online friendship, cyberbullying, and psychosocial adjustment in Hong Kong Chinese children. *Journal of Social and Clinical Psychology, 32*(2), 159-185.

Leung, Wong, S. S., Lit, S.-w., Chan, C., Cheung, F., & Wong, P.-l. (2016). Cyber youth work in Hong Kong: Specific and yet the same. *International Social Work*, 0020872815603784.

Leung, J. C. (2002). The advent of managerialism in social welfare: The case of Hong Kong. *The Hong Kong Journal of Social Work, 36*(01n02), 61-81.

Levy, N., Cortesi, S., Gasser, U., Crowley, E., Beaton, M., Casey, J., & Nolan, C. (2012). Bullying in a networked era: A literature review. *Berkman Center Research Publication*(2012-17).

Lewthwaite, B. (2011). *University of Manitoba Centre for Research in Youth, Science Teaching and Learning: applications and utility of Urie Bronfenbrenner's Bio-ecological Theory*: University of Manitoba.

Li, Q. (2006). Cyberbullying in schools a research of gender differences. *School psychology international, 27*(2), 157-170.

Li, Q. (2007a). Bullying in the new playground: Research into cyberbullying and cyber victimisation. *Australasian Journal of Educational Technology, 23*(4), 435-454.

Li, Q. (2007b). New bottle but old wine: A research of cyberbullying in schools. *Computers in human behavior, 23*(4), 1777-1791.

Li, Q. (2008). A cross-cultural comparison of adolescents' experience related to cyberbullying. *Educational Research, 50*(3), 223-234. doi:10.1080/00131880802309333

Li, Q., Cross, D., & Smith, P. K. (2011). *Cyberbullying in the global playground: Research from international perspectives*: John Wiley & Sons.

Liang, Z. (2002). Public Security Information System Structure "Golden Shield Project" in Chinese (〝金盾工程〞中公安信息系统结构). *警察技术*(3), 13-15.

Limber, S. P. (2012). *Cyberbullying: Bullying in the digital age*: Wiley. com.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75): Sage.

Liu, J. T. (1985). The classical Chinese primer: its three-character style and authorship. *Journal of the American Oriental Society*, 191-196.

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: teenagers' use of social networking sites for intimacy, privacy and self-expression. *new media & society, 10*(3), 393-411.

Livingstone, S. (2013). Online risk, harm and vulnerability: Reflections on the evidence base for child Internet safety policy. *ZER: Journal of Communication Studies, 18*(35), 13-28.

Lovibond, S., & Lovibond, P. F. (1996). *Manual for the depression anxiety stress scales*: Psychology Foundation of Australia.

Maccoby, E. E., & Martin, J. A. (1983). *Socialization in the context of the family: Parent-child interaction* (4 ed.): Wiley.

Mackenzie, N., & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. *Issues in educational research, 16*(2), 193-205.

Mann, B. L. (2009). Social networking websites–a concatenation of impersonation, denigration, sexual aggressive solicitation, cyber-bullying or happy slapping videos. *International Journal of Law and Information Technology, 17*(3), 252-267.

Manyika, J., Chui, M., Brown, B., Bughin, J., Dobbs, R., Roxburgh, C., & Byers, A. H. (2011). *Big data: The next frontier for innovation, competition, and productivity*. Retrieved from

Marwick, A., & boyd, d. (2014). 'It's just drama': teen perspectives on conflict and aggression in a networked era. *Journal of Youth Studies*, 1-18.

Mascheroni, G., & Ólafsson, K. (2014). *Net children go mobile: Risks and opportunities*: Educatt.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review, 50*(4), 370.

Menesini, E., & Nocentini, A. (2009). Cyberbullying definition and measurement. *Zeitschrift für Psychologie/Journal of Psychology, 217*(4), 230-232.

Mertens, D. M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative & qualitative approaches*. US: Sage Publications.

Microsoft. (2012). *Online Bullying Among Youth 8-17 Years Old – Worldwide*. Retrieved from download.microsoft.com/.../WW%20Online%20Bullying%20Survey%

Miller, T., Mauthner, M., Birch, M., & Jessop, J. (2012). *Ethics in qualitative research*: Sage.

Moustakas, C. (1994). *Phenomenological research methods*: Sage Publications.

Nansel, T. R., Haynie, D. L., & Simonsmorton, B. G. (2003). The association of bullying and victimization with middle school adjustment. *Journal of Applied School Psychology, 19*(2), 45-61.

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US youth: Prevalence and association with psychosocial adjustment. *Jama, 285*(16), 2094-2100.

Nansel, T. R., Overpeck, M. D., Haynie, D. L., Ruan, W. J., & Scheidt, P. C. (2003). Relationships between bullying and violence among US youth. *Archives of Pediatrics & Adolescent Medicine, 157*(4), 348-353.

National Center for Education Statistics. (2015). *Student Reports of Bullying and Cyber-Bullying: Results From the 2013 School Crime Supplement to the National Crime Victimization Survey*. Retrieved from US:

Neuman, L. W. (2003). *Social research methods: Qualitative and quantitative approaches*: Allyn and Bacon.

Notar, C. E., & Padgett, S. (2013). Adults Role in Bullying. *Universal Journal of Educational Research, 1*(4), 294-297.

O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics, 127*(4), 800-804.

Olweus, D. (1994). *Bullying at school*: Springer.

Olweus, D. (2012). Cyberbullying: An overrated phenomenon? *European Journal of Developmental Psychology, 9*(5), 520-538.

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual review of clinical psychology, 9*, 751-780.

Ong, R. (2015). Cyber-bullying and young people: How Hong Kong keeps the new playground safe. *Computer Law & Security Review, 31*(5), 668-678.

Ortega, R., Elipe, P., Mora‐Merchán, J. A., Genta, M. L., Brighi, A., Guarini, A., . . . Tippett, N. (2012). The emotional impact of bullying and cyberbullying on victims: a European cross‐national study. *Aggressive behavior, 38*(5), 342-356.

Palasinski, M. (2013). Turning assault into a "harmless prank"—teenage perspectives on happy slapping. *Journal of interpersonal violence, 28*(9), 1909-1923.

Papatraianou, L. H., Levine, D., & West, D. (2014). Resilience in the face of cyberbullying: an ecological perspective on young people's experiences of online adversity. *Pastoral Care in Education, 32*(4), 264-283.

Pardeck, J. T. (1988). Ecological Approach for Social Work Practice, An. *The Journal of Sociology & Social Welfare, 15*, 133.

Parry, G. (2005). Camera/video phones in schools: law and practice. *Education and the Law, 17*(3), 73-85.

Patchin, J. W., & Hinduja, S. (2006). Bullies move beyond the schoolyard a preliminary look at cyberbullying. *Youth violence and juvenile justice, 4*(2), 148-169.

Patton, M. Q. (2003). *Qualitative evaluation and research methods* (3 ed.): SAGE Publications.

Pearce, N., Cross, D., Monks, H., Waters, S., & Falconer, S. (2011). Current evidence of best practice in whole-school bullying intervention and its potential to inform cyberbullying interventions. *Australian journal of Guidance and Counselling, 21*(01), 1-21.

Peshkin, A. (1988). In search of subjectivity—one's own. *Educational researcher, 17*(7), 17-21.

Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using Interpretative Phenomenological Analysis in qualitative research psychology. *Psychological Journal, 20*(1), 7-14.

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of counseling psychology, 52*(2), 137.

Pornari, C. D., & Wood, J. (2010). Peer and cyber aggression in secondary school students: The role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive behavior, 36*(2), 81.

Preissle, J. (2008). Subjectivity statement. *The SAGE encyclopedia of qualitative research methods, 2*, 844-845.

Prensky, M. (2001). Digital natives, digital immigrants. *On the horizon, 9*(5), 1-6.

ProQuest. (2016). Search for "Cyberbullying"(1 September,2016). Retrieved from http://search.proquest.com/results/49E8D4950238486FPQ/1/$5bqueryType$3dbasic:OS$3b+sortType$3drelevance$3b+searchTerms$3d$5b$3cAND$7ccitationBodyTags:cyberbullying$3e$5d$3b+searchParameters$3d$7bNAVIGATORS$3dnavsummarynav,sourcetypenav,pubtitlenav,objecttypenav,languagenav$28filter$3d200$2f0$2f*$29,decadenav$28filter$3d110$2f0$2f*,sort$3dname$2fascending$29,yearnav$28filter$3d1100$2f0$2f*,sort$3dname$2fascending$29,yearmonthnav$28filter$3d120$2f0$2f*,sort$3dname$2fascending$29,monthnav$28sort$3dname$2fascending$29,daynav$28sort$3dname$2fascending$29,+RS$3dOP,+jstorMuseCollections$3dMUSEALL,+chunkSize$3d100,+instance$3dprod.academic,+ftblock$3d740842+1+55001+55000+113+670831+670829+660845+660843+660840+55113,+removeDuplicates$3dtrue$7d$3b+metaData$3d$7bUsageSearchMode$3dQuickSearch,+dbselections$3dhistory$7cdissertations$7carts$7csocialsciences$7cliterature$7chealth$7cbusiness$7cscience,+SEARCH_ID_TIMESTAMP$3d1396580398368$7d$5d?accountid=9730

Rey, R. D., Elipe, P., & Ortega-Ruiz, R. (2012). Bullying and cyberbullying: overlapping and predictive value of the co-occurrence. *Psicothema, 24*(4).

Riessman, C. K. (1993). Narrative analysis. *Qualitative Research Method, 30*, 1-7.

Rivers, I., & Noret, N. (2010). ′I h8 u′: findings from a five‐year study of text and email bullying. *British Educational Research Journal, 36*(4), 643-671.

Rivituso, J. (2014). Cyberbullying victimization among college students: An interpretive phenomenological analysis. *Journal of Information Systems Education, 25*(1), 71.

Roberge, G. D. (2012). From zero tolerance to early intervention: The evolution of school anti-bullying policy. *Journal of Education Policy, 1*, 1-6.

Roberto, A. J., Eden, J., Savage, M. W., Ramos-Salazar, L., & Deiss, D. M. (2014). Prevalence and predictors of cyberbullying perpetration by high school seniors. *Communication Quarterly, 62*(1), 97-114.

Robson, C. (2005). Real world research: A resource for social scientists and practitioner-researchers *chap* (2 ed., Vol. 12, pp. 383-385): Blackwell Publishing.

Rodkin, P. C., & Gest, S. D. (2011). Teaching practices, classroom peer ecologies, and bullying behaviors among schoolchildren. *Bullying in North American schools*, 75-90.

Rost, K., Stahel, L., & Frey, B. S. (2016). Digital social norm enforcement: Online firestorms in social media. *PLoS One, 11*(6), e0155923.

Runions, K., Shapka, J. D., Dooley, J., & Modecki, K. (2013). Cyber-aggression and victimization and social information processing: Integrating the medium and the message. *Psychology of Violence, 3*(1), 9.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. *Administrative science quarterly*, 224-253.

Salmivalli, C., & Pöyhönen, V. (2012). Cyberbullying in Finland *Cyberbullying in the global playground: Research from international perspectives* (pp. 57-72). UK: Wiley Blackwell.

Sanders, J., Smith, P., & Cillessen, A. (2009). *Cyberbullies: Their motives, characteristics, and types of bullying.* Paper presented at the XIV European Conference on Developmental Psychology, Vilnius, Lithuania, August.

Saunders, R. (2005). Happy slapping: Transatlantic contagion or home-grown, mass-mediated nihilism. *The London Consortium*(1), 1-11.

Seiler, S. J., & Navarro, J. N. (2014). Bullying on the pixel playground: Investigating risk factors of cyberbullying at the intersection of children's online-offline social lives. *Journal of Psychosocial Research on Cyberspace, 8(4)*.

Selkie, E. M., Fales, J. L., & Moreno, M. A. (2016). Cyberbullying Prevalence Among US Middle and High School–Aged Adolescents: A Systematic Review and Quality Assessment. *Journal of Adolescent Health, 58*(2), 125-133.

Semaan, S., Lauby, J., & Liebman, J. (2002). Street and network sampling in evaluation studies of HIV risk-reduction interventions. *Aids Reviews, 4*(4), 213-223.

Shariff, S. (2004). Keeping schools out of court: Legally defensible models of leadership. *The Educational Forum, 68*(3), 222-233.

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying? *Scandinavian journal of psychology, 49*(2), 147-154.

Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying, and strategies for prevention. *Computers in human behavior, 29*(1), 26-32.

Smith. (1975). *Strategies of social research: The methodological imagination*: Prentice-Hall.

Smith, Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry, 49*(4), 376-385.

Smith, P., Mahdavi, J., Carvalho, M., & Tippett, N. (2006). An investigation into cyberbullying, its forms, awareness and impact, and the relationship between age and gender in cyberbullying. *Research Brief No. RBX03-06. London: DfES*.

Smith, P. K. (2012). Cyberbullying: Challenges and opportunities for a research program—A response to Olweus (2012). *European Journal of Developmental Psychology, 9*(5), 553-558.

Smith, P. K., del Barrio, C., & Tokunaga, R. S. (2013). *Definitions of bullying and cyberbullying: How useful are the terms*. UK: Routledge.

Smith, P. K., Madsen, K. C., & Moody, J. C. (1999). What causes the age decline in reports of being bullied at school? Towards a developmental analysis of risks of being bullied. *Educational Research, 41*(3), 267-285.

Sourander, A., Klomek, A. B., Ikonen, M., Lindroos, J., Luntamo, T., Koskelainen, M., . . . Helenius, H. (2010). Psychosocial risk factors associated with cyberbullying among adolescents: A population-based study. *Archives of general psychiatry, 67*(7), 720-728.

Steinhart, E. C. (2014). *Your digital afterlives: Computational theories of life after death*: Palgrave Macmillan.

Stevenson, A. (2015). Oxford Dictionary of English. Online Version: Oxford reference online. New York: Oxford University Press. Available from< http://www. oxfordreference. com/view/10.1093/acref/9780199571123.001.

Stone, K. (2014). *Looking at bullying and cyberbullying: mapping approaches and knowledge*. Retrieved from UK:

Swearer, S. M., & Espelage, D. L. (2011). Expanding the social-ecological framework of bullying among youth: Lessons learned from the past and directions for the future. *Bullying in North American schools, 2*, 3-10.

Taiariol, J. (2010). *Cyberbullying: The Role Of Family And School.* (DOCTOR OF PHILOSOPHY), Wayne State University, US.

Taouk, M., Lovibond, P., & Laube, R. (2001). Psychometric properties of a Chinese version of the 21-item Depression Anxiety Stress Scales (DASS21). *Report for New South Wales Transcultural Mental Health Centre, Cumberland Hospital, Sydney*.

Taraszow, T., Aristodemou, E., Shitta, G., Laouris, Y., & Arsoy, A. (2010). Disclosure of personal and contact information by young people in social networking sites: An analysis using Facebook profiles as an example. *International Journal of Media & Cultural Politics, 6*(1), 81-101.

Tashakkori, A., & Teddlie, C. (2010). *Sage handbook of mixed methods in social & behavioral research*: Sage.

Taylor, I. M., & Lonsdale, C. C. (2010). Cultural differences in the relationships among autonomy support, psychological need satisfaction, subjective vitality, and effort in British and Chinese physical education. *Journal of Sports and Excercise Psychology, 32(5)*.

Thorp, D. (2004). Cyberbullies on the prowl in schoolyard. Retrieved from http://australianit.news.com.au/articles/0,7204,9980900%5E15322%5E%5Enbv%5E15306,00.html

Times. (2014). Visualizing language usage of "Cyberbullying" in New York Times news coverage throughout its history (12 Apr 2015). *Chronicle.* Retrieved from http://chronicle.nytlabs.com/?keyword=cyberbullying&format=count

Tokunaga, R. S. (2009). High-speed Internet access to the other: The influence of cultural orientations on self-disclosures in offline and online relationships. *Journal of Intercultural Communication Research, 38*(3), 133-147.

Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in human behavior, 26*(3), 277-287.

Tsitsika, A., Janikian, M., Wójcik, S., Makaruk, K., Tzavela, E., Tzavara, C., . . . Richardson, C. (2015). Cyberbullying victimization prevalence and associations with internalizing and externalizing problems among adolescents in six European countries. *Computers in human behavior, 51*, 1-7.

Tudge, J. R., Mokrova, I., Hatfield, B. E., & Karnik, R. B. (2009). Uses and misuses of Bronfenbrenner's bioecological theory of human development. *Journal of Family Theory & Review, 1*(4), 198-210.

Turner, P., & Turner, S. (2009). Triangulation in practice. *Virtual reality, 13*(3), 171-181.

Ungar, M. (2002). A deeper, more social ecological social work practice. *Social Service Review, 76*(3), 480-497.

Unluer, S. (2012). Being an insider researcher while conducting case study research. *The qualitative report, 17*(29), 1.

Utting, P., Razavi, S., & Buchholz, R. V. (2012). *The global crisis and transformative social change*: Palgrave Macmillan.

Vaillancourt, T., Trinh, V., McDougall, P., Duku, E., Cunningham, L., Cunningham, C., . . . Short, K. (2010). Optimizing population screening of bullying in school-aged children. *Journal of School Violence, 9*(3), 233-250.

Valkenburg, P. M., & Peter, J. (2009). Social consequences of the internet for adolescents a decade of research. *Current Directions in Psychological Science, 18*(1), 1-5.

Van de Vijver, F., & Tanzer, N. (1998). Bias and equivalence in cross-cultural assessment. *European review of applied psychology, 47*(4), 263-279.

van Geel, M., Vedder, P., & Tanilon, J. (2014). Relationship between peer victimization, cyberbullying, and suicide in children and adolescents: A meta-analysis. *JAMA pediatrics*(March 10).

Vandebosch, H., & Van Cleemput, K. (2008). Defining cyberbullying: A qualitative research into the perceptions of youngsters. *CyberPsychology & Behavior, 11*(4), 499-503.

Vannucci, M., Nocentini, A., Mazzoni, G., & Menesini, E. (2012). Recalling unpresented hostile words: False memories predictors of traditional and cyberbullying. *European Journal of Developmental Psychology, 9*(2), 182-194.

Virginia Dalla Pozza, Anna Di Pietro, Sophie Morel, & Psaila, E. (2016). *Cyberbullying among Young People*. Retrieved from Brussels:

von Marées, N., & Petermann, F. (2012). Cyberbullying: An increasing challenge for schools. *School psychology international, 33*(5), 467-476.

Walther, J. B. (1992). Interpersonal effects in computer-mediated interaction a relational perspective. *Communication research, 19*(1), 52-90.

Walther, J. B. (1996). Computer-mediated communication impersonal, interpersonal, and hyperpersonal interaction. *Communication research, 23*(1), 3-43.

Wan, L. M. (2008). *Survey on bullying behavior of adolescents in Hong Kong and Macao (in Chinese) 港澳青少年欺凌行為調查報告*. Retrieved from Hong Kong: www.hkpa.hk

Wan, L. M. (2011). *Survey report on Internet addiction among teenager in Hong Kong and Macao (in Chinese) 港澳青少年網絡成癮調查報告* Retrieved from Hong Kong:

Wan, L. M. (2014). *Comparative studies on cyber bullying among adolescents in Hong Kong , Macao and GuangZhou.* Paper presented at the 2014 Joint World Conference on Social Work, Education and Social Development, Melbourne.

Wang, C. C., & Geale, S. K. (2015). The power of story: narrative inquiry as a methodology in nursing research. *International Journal of Nursing Sciences, 2*(2), 195-198.

Wang, J., Iannotti, R. J., Luk, J. W., & Nansel, T. R. (2010). Co-occurrence of victimization from five subtypes of bullying: Physical, verbal, social exclusion, spreading rumors, and cyber. *Journal of pediatric psychology, 35*(10), 1103-1112.

Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health, 45*(4), 368-375.

Wang, J., Nansel, T. R., & Iannotti, R. J. (2011). Cyber bullying and traditional bullying: Differential association with depression. *Journal of Adolescent Health, 48*(4), 415.

Weber, M., Ziegele, M., & Schnauber, A. (2013). Blaming the victim: the effects of extraversion and information disclosure on guilt attributions in cyberbullying. *Cyberpsychology, Behavior, and Social Networking, 16*(4), 254-259.

Wesler, H., Smith, M., Fisher, D., & Gleave, E. (2008). Distilling digital traces: Computational social science approaches to studying the internet. *The Sage handbook of online research methods. Sage*, 116-140.

Whitley, B. E. (1997). Gender differences in computer-related attitudes and behavior: A meta-analysis. *Computers in human behavior, 13*(1), 1-22.

Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. *Educational Research, 35*(1), 3-25.

Willard. (2007). *Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress*: Research Press.

Williams, G., Horwitz, Claudia; Vega-Frey, Jesse; Maina, Ng'ethe; Haines, Staci K. (2010). *Framing Deep Change: Essays on Transformative Social Change*: Third Way Press.

Williams, K. R., & Guerra, N. G. (2007). Prevalence and predictors of internet bullying. *Journal of Adolescent Health, 41*(6), S14-S21.

Winter, P., & Crandall, J. R. (2012). The Great Firewall of China. *;login: The Usenix Magazine, 37*.

Wong, D. S., Chan, H. C. O., & Cheng, C. H. (2014). Cyberbullying perpetration and victimization among adolescents in Hong Kong. *Children and Youth Services Review, 36*, 133-140.

Wong, D. S., Cheng, C. H., Li, C., & Wan, L. M. (2009). *A Study of Bullying and Resilience among Young People in Guangzhou, Hong Kong, and Macau (in Chinese)*: HK Playground Association.

World Bank. (2015). World Development Indicators: Power and communications. http://wdi.worldbank.org/table/5.11#

WorldBank. (2015). Internet users (per 100 people). *World Development Indicators.* Retrieved from http://data.worldbank.org/indicator/IT.NET.USER.P2

XU, Q. (2011). 由虛擬走到真實的網絡文化: 從高登論壇看本土主流媒體, 流行文化與網絡社群的互動與衝突. *Cultural Studies@ Lingnan 文化研究@ 嶺南, 22*(1), 1.

Yan, M. C., Cheung, J. C.-S., Tsui, M.-s., & Chu, C. K. (2015). Examining the neoliberal discourse of accountability: The case of Hong Kong's social service sector. *International Social Work*, 0020872815594229.

Yardi, S., & Bruckman, A. (2011). *Social and technical challenges in parenting teens' social media use.* Paper presented at the Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, Vancouver, BC, Canada.

Ybarra, M. L., Boyd, D., Korchmaros, J. D., & Oppenheim, J. K. (2012). Defining and measuring cyberbullying within the larger context of bullying victimization. *Journal of Adolescent Health, 51*(1), 53-58.

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry, 45*(7), 1308-1316.

Yin, R. K. (2013). *Case study research: Design and methods*: Sage Publications.

Yip, P. (2016, 18 May). After Hong Kong's spate of student suicides, we should all act as digital Samaritans for those in need. *South China Morning Post*.

You, S., & Lim, S. A. (2016). Longitudinal predictors of cyberbullying perpetration: Evidence from Korean middle school students. *Personality and Individual Differences, 89*, 172-176.

Zhang, X. H. (2009). *An exploration of student teachers' interaction with on-line activities, and their influence on their teaching topics such as netiquette and cyber-bullying: an Australian and Chinese study.* Griffith University.

Zhang, Y. B., Lin, M.-C., Nonaka, A., & Beom, K. (2005). Harmony, hierarchy and conservatism: A cross-cultural comparison of Confucian values in China, Korea, Japan, and Taiwan. *Communication Research Reports, 22*(2), 107-115.

Zhong, H., Li, H., Squicciarini, A. C., Rajtmajer, S. M., Griffin, C., Miller, D. J., & Caragea, C. (2016). *Content-Driven Detection of Cyberbullying on the Instagram Social Network.* Paper presented at the International Joint Conference on Artificial Intelligence, New York City.

Zhou, Z., Tang, H., Tian, Y., Wei, H., Zhang, F., & Morrison, C. M. (2013). Cyberbullying and its risk factors among Chinese high school students. *School psychology international, 34*(6), 630-647. doi:10.1177/0143034313479692

Zwitter, A. (2014). Big data ethics. *Big Data & Society, 1*(2), 2053951714559253.

Appdendix

Appendix 1: GSoE Research Ethics Form

Research and Enterprise Development University of Bristol

Application Review Logout

ID	Name	Faculty	Department	Supervisor
21782	Mr Lap Man Wan	Faculty of Social Sciences and Law	Graduate School of Education	Dr Helen Manchester

Status
Signed off
Date added
May 18, 2015
Signed off date
June 18, 2015
Is this a student project?
Postgraduate Phd
Project title
Cyberbullying research project
Estimated start date
July 1, 2015
Duration (months)
12
Project outline
Cyberbullying is a new global phenomenon. However, pervious study on Chinese is very limited. The purpose of this study is to identify the impacts of Cyberbullying among adolescent in Chinese's cities. This is an exploratory study using Bronfenbrenner's ecological systems theory as a framework to analysis the various factors affecting cyber bullying behaviour among young people. Two stages mixed method will be employed in data collection. Stage one will focus on the qualitative side by conducting an in-depth case study. It is expected to provide information on the factors affecting the ecological systems of adolescent in cyberbullying. The stage one result can facilitate the development of stage two instruments in measuring cyberbullying prevalence rate and impact in Chinese society. Stage two will be on the quantitative side by conducting a large-scale survey and using statistical analysis. Different sources of data can enhance the reliability and validity of the study. The study result can provide a benchmark for local NGO and policy maker. The instrument and identified factors influencing Cyberbullying can help to design effective service or policy for adolescent in need.
Files
Research site approvals ethics/21782/hkpa_agnecyreply_page_2.jpg (212.8 KB added on May 20, 2015)
Other ethics/21782/gsoe-ethics-formlapmanmay11.pdf (1.7 MB added on May 20, 2015)

L1. Does your research involve any of the following?

- **Medical Devices, ionising radiation, drugs, placebos or other substances to be administered to participants.**

- Any proceedings for any offence committed or alleged to have been committed by them, the disposal of such proceedings or the sentence of any court in such proceedings.

If the research is in relation to any of the sensitive topics listed under the DPA 1998 then the legal issue requiring such scrutiny in such cases that 'explicit consent' must be obtained.

1e. Does the research involve invasive procedures?

Invasive procedures may include:

- Administration of drugs placebos, or other substances (e.g., drinks, foods, food or drink constituents, dietary supplements) to study participants;
- Biological samples from participants be obtained;
- Pain or more than mild discomfort likely to result from the study.

No

1f. Does the research involve scans or x-rays of research participants? No

1g. Does the research involve photographs, videoing, recording or similar of research participants? Yes

1h. Will financial inducement (other than reasonable expenses and compensation for time) be offered? No

1i. Will the study involve the use or storage of information about living people whose personal identity could be discovered from that information? No

1j. Does the study risk causing psychological stress or anxiety or other harm or negative consequences beyond that normally encountered by the participants in their life outside research? Yes

2. Will the research involve politically and culturally sensitive funding sources?

Examples include the defence sector, projects with potential environmental effects and other internationally regulated or protected industries. For more information, please follow the link to the 'Research Governance and Integrity Policy': http://www.bris.ac.uk/red/support/governance/RGI.pdf (this link opens in a new window).

No

3. Will the research involve politically, culturally or socially sensitive topics?

For more information, please follow the link to the Faculty of Arts Ethics Committee Guidance Note (PDF 78kb) (this link opens in a new window).

No

Supporting information
(maximum 3000 characters)

Please provide any additional information in relation to your study such as adhering to a particular SOP or confirming if your study is a service evaluation/audit as opposed to research.

Date	Name	Comment
	[redacted]	This is a study that has required some careful ethical thought as the topic is potentially emotionally sensitive to participants. The applicant has provided the supervisor with several iterations of this. He has also consulted professionals who work with young people in his country in order to establish the best way forward. I am satisfied that he has thought through the concerns I raised throughout the process of thinking through these ethics. The attention to ethics is exemplary, particularly with respect to collaboration with NGO with professional expertise in supporting adolescents affected by cyber bullying to ensure that qualified social worker ensures child protection issues are observed during qualitative research, and professional counselling services are available for all participants, including questionnaire

Appendix 2: Agency Approval Letter

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 IJA
England

Executive Director
[redacted]

15th May,2015

Dear Edward,

Invitation for the participation in
the Cyberbullying research project

I am Wan lap man, the Principal Investigator of Cyberbullying research project at the University of Bristol, and would be very grateful if you can support the study. Through your agency participation, I hope to understand more about cyberbullying in local context and provide suggestions for government and local NGO to design suitable service for the young people in need.

Confidentiality and anonymity are the essential concern in this study. No personal identity and names of the research participants will be disclosed in any format and report. Only the research team will have access to the original data collected.

Should you have enquiries, please feel free to call 92298724. I hope I can look forward to your agency participation in the research project.

Yours sincerely,

[redacted]

Mr. Wan lap man,
Principal Investigator
Cyberbullying research project
University of Bristol

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

Cyberbullying research project
Reply Slip
(Fax no. [redacted]

Mr. Wan lap man
[redacted]

Invitation for the participation in the
Cyberbullying research project

Our staffs *(would) / would not like to participate the research mentioned above.

Signature of the responsible person : [redacted]
Name of the responsible person : Edward Leung
Title of the responsible person : Executive Director
Name of the Agency : Hong Kong Playground Association
Date : 20th May ,2015

*please circle the appropriate options

Appendix 3: Research Participant Consent Letter

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

Dear Participants,

Informed Consent to participate in Cyberbullying research project (Interview)

I am inviting you to participate in our research project to study Cyberbullying in Hong Kong. This project has been approved by the University of Bristol at United Kingdom and Hong Kong Playground Association. You are being asked to participate because you are teenager and randomly selected by local research partner. The researcher will invite you to join an interview that will take approximately one hour. The interview questions will be related to your experience in cyberbullying. Through your participation, I hope to understand more about cyberbullying in local context and provide suggestions for government and local NGO to design suitable service for the young people in need.

I will do my best to keep your information confidential and abide the local law on personal privacy protection. This study will not contain any information that will personally identify you such as name, phone number, school name and id no. All information collected in this study will be kept completely confidential to the extent permitted by law.

Your participation is voluntary and there is no penalty if you do not participate. You may stop the interview at any time or skip any questions you do not wish to answer. Before the interview, I will have a briefing on the safety measure to protect your privacy and your right to withdraw in the interview. The interview will start until you completely understand your right and willing to join the study. Counselling service and hotline will be available for you if necessary until the end of 2016. You may keep or print this form for your record.

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

If you have any questions about the interview, please feel free to contact me at [redacted] If you have any queries about the research project or any complaints about your right as a research study participant, you may contact our research project consultant Dr. Helen Manchester of the University of Bristol at (44) 0 117 331 4401, helen.manchester@bristol.ac.uk.

Your Sincerely,

[redacted]

Lapman Wan
BSW(HKU),M.Soc.Sci(HKU),RSW
Principal Investigator of
Cyberbullying research project
Chief Development Officer (Research & Strategy)
Hong Kong Playground Association
1/7/2016

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

親愛的參與者:

參與網絡欺凌研究知情同意書(訪問)

歡迎您參加香港網絡欺凌研究計劃,該項目已獲得英國布里斯托大學批准及香港遊樂場協會同意協助進行。由於您屬於是次研究對象並獲隨機選中接受訪問,訪問約需 1 小時。調查問題主要是關於您以往在網絡欺凌方面的體驗。您的參與,能使我們更了解網絡欺凌在本地的情況,並為政府和非政府組織提出建議,設計更有效的服務幫助面對網絡欺凌的青少年。

本會將盡所能,將您的個人訊息保密,並遵守本地針對個人隱私保護的法律。是次調查將不收集能識別您個人的任何信息,例如姓名,電話號碼,學校名稱和身分證編號。是次研究中的所有資料將在法律允許的範圍內完全保密。

您的參與完全是自願性的,如果您不參加亦沒有問題。此外,訪問中你可隨時停止回答或跳過你不想回答任何問題。正式訪問前,我會向您簡介有關保障個人私隱的措施與及您的有關權利,當您表示完全明白及願意參與後才會開始訪問。如有需要,我們亦會為您提供輔導及熱線服務至 2016 年底,你可以保留或打印本文件以作記錄。

如果您對訪問有任何疑問,可隨時與我聯繫(電話:[redacted]),如您對作為研究參與者的權利有任何疑問或投訴, 你亦可聯絡研究顧問: 英國布里斯托大學海倫博士(Dr. Helen Manchester (44) 0 117 331 4401, helen.manchester@bristol.ac.uk)。

祝 生活愉快,身體健康!

[redacted]

溫立文
BSW（HKU），M.Soc.Sci（HKU），RSW
網絡欺凌研究項目研究員
總發展主任（研究及策略）
香港遊樂場協會
1/7/2016

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

Dear Participants,

Informed Consent to participate in Cyberbullying research project (Survey)

I am inviting you to participate in our research project to study Cyberbullying in Hong Kong. This project has been approved by the University of Bristol at United Kingdom and Hong Kong Playground Association. You are being asked to participate because you are teenager and randomly selected by local research partner. The researcher procedure involves completing a survey that will take approximately 10 minutes. The survey questions will be related to your experience in cyberbullying. Through your participation, I hope to understand more about cyberbullying in local context and provide suggestions for government and local NGO to design suitable service for the young people in need.

I will do my best to keep your information confidential and abide the local law on personal privacy protection. This survey will not contain any information that will personally identify you such as name, phone number, school name and id no. All information collected in this study will be kept completely confidential to the extent permitted by law.

Your participation is voluntary and there is no penalty if you do not participate. You may stop the survey at any time or skip any questions you do not wish to answer. By completing this survey, you are indicating that you have read this document, have had any questions answered, and voluntarily agree to take part in this research study. You may keep or print this form for your record.

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

If you have any questions about the interview, please feel free to contact me at ([redacted] If you have any queries about the research project or any complaints about your right as a research study participant, you may contact our research project consultant Dr. Helen Manchester of the University of Bristol at (44) 0 117 331 4401, helen.manchester@bristol.ac.uk.

Your Sincerely,

[redacted]

Lapman Wan
BSW(HKU),M.Soc.Sci(HKU),RSW
Principal Investigator of
Cyberbullying research project
Chief Development Officer (Research & Strategy)
Hong Kong Playground Association
1/7/2016

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

親愛的參與者:

參與網絡欺凌研究知情同意書(問卷調查)

邀請您參加香港網絡欺凌研究，該項目已獲得英國布里斯托大學批准進行。由於您屬於是次研究對象並獲隨機選中， 誠意邀請您協助有關研究，填寫一份調查問卷，大約需時 10 分鐘。調查問題主要是你以往在網絡欺凌方面的體驗。您的參與，能使我們更了解網絡欺凌在本地的情況，並為政府和非政府組織提出建議，設計更有效的服務幫助面對網絡欺凌的青少年。

我們將盡所能，將您的個人訊息保密，並遵守本地針對個人隱私保護的法律。是次調查將不收集能識別您個人的任何信息，例如姓名，電話號碼，學校名稱和身分證編號。是次研究中的所有資料將在法律允許的範圍內完全保密。

您的參與是自願的，如果你不參加亦沒有問題。此外，你可隨時停止回答或跳過你不想回答任何問題。通過完成本次調查，你表明您已經閱讀這個文件，並自願同意參與這項研究。你可以保留或打印本文件作記錄。

如果您對填寫調查問卷或對本研究有任何疑問，可隨時與我聯繫(電話:[redacted])，如您對作為研究參與者的權利有任何疑問或投訴，你亦可聯絡研究顧問：英國布里斯托大學海倫博士 Dr. Helen Manchester (44) 0 117 331 4401, helen.manchester@bristol.ac.uk 。

祝 生活愉快，身體健康!

[redacted]

溫立文
BSW（HKU），M.Soc.Sci（HKU），RSW
網絡欺凌研究項目研究員
總發展主任（研究及策略）
香港遊樂場協會
1/7/2016

Appendix 4: Letter to Parent/Guardian

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

Dear Guardian of research participant,

Letter to Parent/Guardian of research participant
Cyberbullying research project (Interview)

I am Mr. Wan lap man, the Principal Investigator of Cyberbullying research project at the University of Bristol and Hong Kong Playground Association. Your child has been randomly selected as research participant. We would be very grateful if you can support the study. Through your child's participation, we hope to understand more about cyberbullying in local context and provide suggestions for government and local NGO to design suitable service for the young people in need. Your child's participation is voluntary and there is no penalty if he/she does not participate. Your child may stop the interview at any time or skip any questions he/she does not wish to answer. Parent/Guardian's approval is required as a prior condition for the interview of participant under age of eighteen.

Confidentiality and anonymity are the essential concern in this study. No personal identity and names of the research participants will be disclosed in any format and report. Only the research team will have access to the original data collected. Counselling service and hotline will be available for your child if necessary until the end of 2016. You may keep or print this form for your record.

If you have any questions about the interview, please feel free to contact me at ([redacted] If you have any queries about the research project or any complaints about your right as a research study participant, you may contact our research project consultant Dr. Helen Manchester of the University of Bristol at (44) 0 117 331 4401, helen.manchester@bristol.ac.uk.

Your Sincerely,

[redacted]

Lapman Wan
BSW(HKU),M.Soc.Sci(HKU),RSW
Principal Investigator of Cyberbullying research project
Chief Development Officer (Research & Strategy)
Hong Kong Playground Association

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

1/7/2016

親愛的參與者家長/監護人:

參與網絡欺凌研究家長同意書(訪問)

歡迎您參加香港網絡欺凌研究計劃,該項目已獲得英國布里斯托大學批准及香港遊樂場協會同意協助進行。由於 貴子弟屬於是次研究對象並獲隨機選中接受訪問。 貴子弟的參與,能使我們更了解網絡欺凌在本地的情況,並為政府和非政府組織提出建議,設計更有效的服務幫助面對網絡欺凌的青少年。

本會將盡所能,將研究對象的個人訊息保密,並遵守本地針對個人隱私保護的法律。是次調查將不收集能識別您個人的任何信息,例如姓名,電話號碼,學校名稱和身分證編號。是次研究中的所有資料將在法律允許的範圍內完全保密。

貴子弟的參與完全是自願性的,如果他/她不參加亦沒有問題。此外,訪問中他/她可隨時停止回答或跳過不想回答任何問題。訪問 18 歲以下人士,必需先獲得家長或監護人同意。如有需要,我們亦會為 貴子弟提供輔導及熱線服務至 2016 年底。隨函附上家長或監護人同意書, 敬請填妥有關回條 讓貴子弟進行訪問前交回, 閣下可以保留或打印本文件以作記錄。

如果您對訪問有任何疑問,可隨時與我聯繫(電話:[redacted]),如您對作為研究參與者的權利有任何疑問或投訴, 你亦可聯絡研究顧問: 英國布里斯托大學海倫博士(Dr. Helen Manchester (44) 0 117 331 4401, helen.manchester@bristol.ac.uk)。

祝 生活愉快,身體健康!

[redacted]

溫立文
BSW（HKU），M.Soc.Sci（HKU），RSW
網絡欺凌研究項目研究員
總發展主任（研究及策略）
香港遊樂場協會
1/7/2016

University of BRISTOL
Graduate School of Education
35 Berkeley Square
Bristol BS8 1JA
England

致 英國布里斯托大學及香港遊樂場協會

參與網絡欺凌研究

家長知情同意書

回條

本人已收到網絡欺凌研究信件，並已知悉有關研究安排，並知道如日後有需要，香港遊樂場協會將可為有需要受訪青少年安排輔導或轉介合適服務。

本人 同意 / 不同意 _____ 參與有關網絡欺凌研究。

* 請刪除不適用者

參加訪問者姓名 :_____

家長/監護人簽署 :_____

Appendix 5: Phase One Interview Questions

Cyberbullying In-depth interview

Interview questions

A Self introduction
A01 Please briefly introduce yourself?

B Reaching out service and interaction with microsystems
B01 How have you been engaged by the social workers?
B02 What is your relationship with your friends?
B03 What is your school life?
B04 What is your relationship with your family?
B05 What is your relationship with neighbor and church

C Significant events in Cyberbullying
Significant events among interviewees' cyberbullying experiences:
Could you share with us on your most impressive cyberbullying experience?

Appendix 6: Phase One Pilot Study and Feedback

Cyberbullying research project

Phase one

Pilot test

Date: 20th May - 30th June,2015

Participants of pilot test

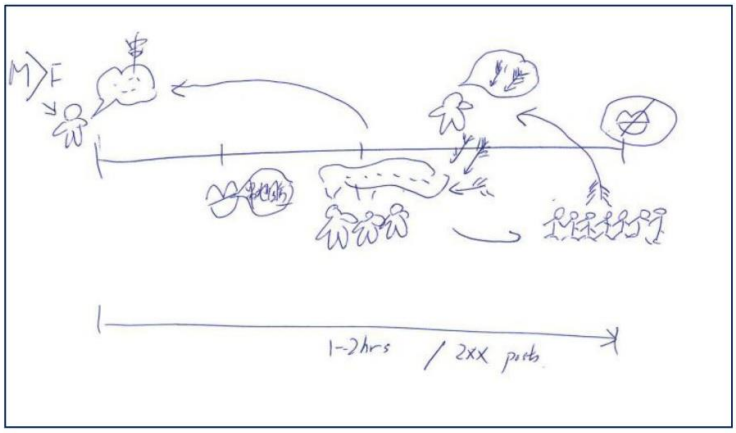
Pilot tests have been done for 5 young people (3 boys & 2 girls). They provided comments and suggestions to improve the interview and questionnaire design.

No.	Gender / Age	Remarks
1	Male /21	Interview ,Briefing and questionnaire
2	Male /20	Interview ,Briefing and questionnaire
3	Female /17	Interview ,Briefing and questionnaire
4	Female /20	Interview ,Briefing and questionnaire
5	Male /16	Interview ,Briefing and questionnaire, Use of drawing and timeline

Suggestion on interview questions

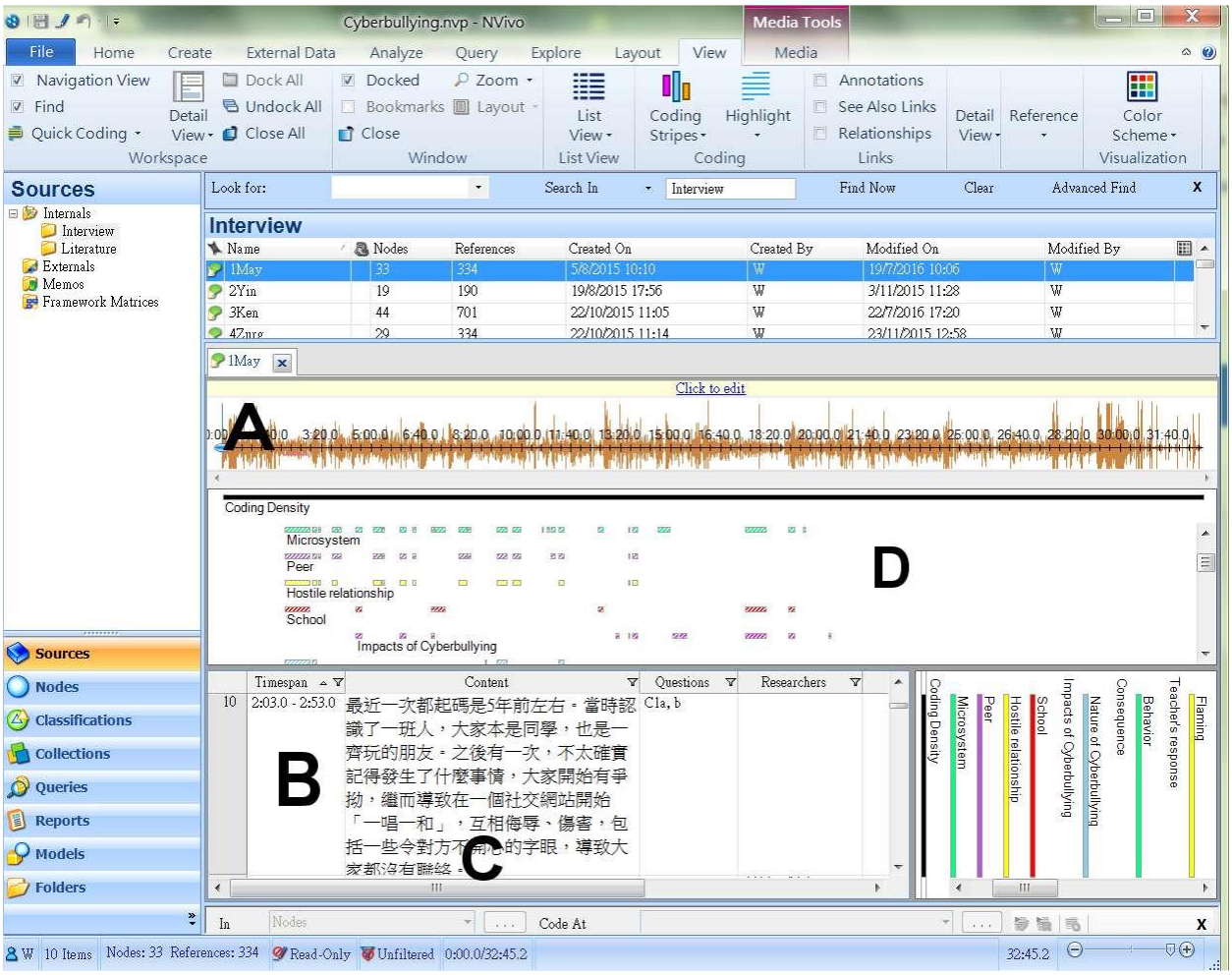
a. Part B (Interaction with microsystems)
    i. Too much for this part.
    ii. It is necessary to control the length of this part.
b. Part C (Significant event in cyberbullying)
    i. The draft questions are too straight forward.
    ii. It is better to have more open end questions.
    iii. The use of metaphor, avatar and drawing are good options in facilitating the young people to share their story.
c. Part D (Third person perception)
    i. The young people will join this part as an observer.
d. The length of questionnaire is appropriate.

Time line and descriptive drawing have been applied in the pilot test.
A bullying scenario descripted by 16 year old boy for his aggressive behavior in facebook. He mobilized a large group of people to post more than 200 aggressive messages in the victim's facebook within 2 hours.



Appendix 7: Phase One NVivo Operation

Transcribed Case Interview



Remarks

A: Interview audio record

B: Time stamp of the interview

C: Transcribed content

D: Coding

Node Structure

29/9/2016 11:01

Node Structure

Cyberbullying

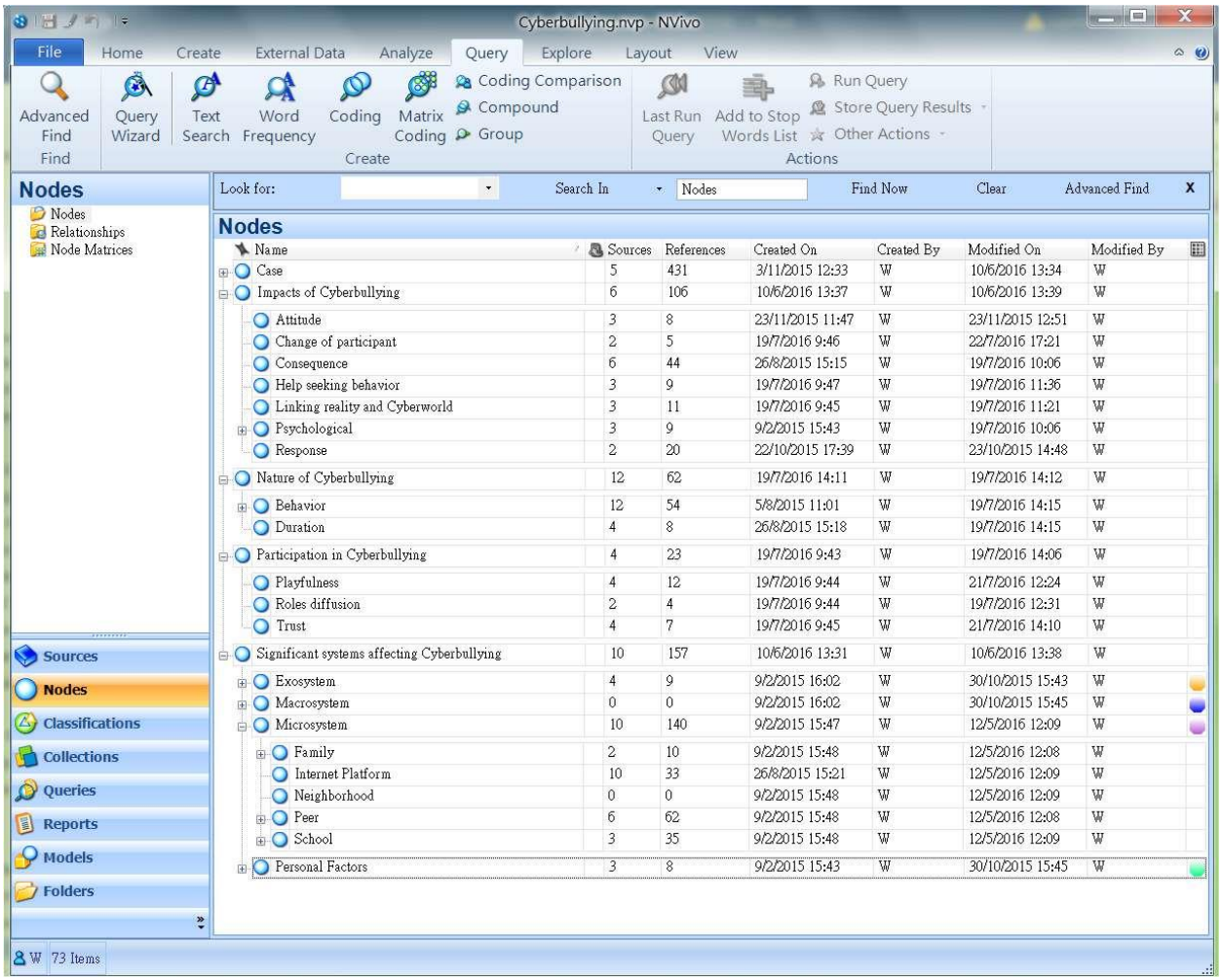
29/9/2016 11:01

Hierarchical Name	Nickname	Aggregate	User Assigned Color
Node			
Nodes			
Nodes\\Impacts of Cyberbullying		Yes	None
Nodes\\Impacts of Cyberbullying\Attitude		No	None
Nodes\\Impacts of Cyberbullying\Change of participant		No	None
Nodes\\Impacts of Cyberbullying\Consequence		No	None
Nodes\\Impacts of Cyberbullying\Help seeking behavior		No	None
Nodes\\Impacts of Cyberbullying\Linking reality and Cyberworld		No	None
Nodes\\Impacts of Cyberbullying\Psychological		No	None
Nodes\\Impacts of Cyberbullying\Psychological\Anxiety		No	None
Nodes\\Impacts of Cyberbullying\Psychological\Depression		No	None
Nodes\\Impacts of Cyberbullying\Psychological\Stress		No	None
Nodes\\Impacts of Cyberbullying\Response		No	None
Nodes\\Nature of Cyberbullying		Yes	None
Nodes\\Nature of Cyberbullying\Behavior		Yes	None
Nodes\\Nature of Cyberbullying\Behavior\Cyber stalking		No	None
Nodes\\Nature of Cyberbullying\Behavior\Denigration		No	None
Nodes\\Nature of Cyberbullying\Behavior\Exclusion		No	None
Nodes\\Nature of Cyberbullying\Behavior\Flaming		No	None
Nodes\\Nature of Cyberbullying\Behavior\Happy slapping		No	None
Nodes\\Nature of Cyberbullying\Behavior\Harassment		Yes	None
Nodes\\Nature of Cyberbullying\Behavior\Impersonation		No	None
Nodes\\Nature of Cyberbullying\Behavior\Masquerade		No	None
Nodes\\Nature of Cyberbullying\Behavior\Outing & Trickery		No	None
Nodes\\Nature of Cyberbullying\Behavior\Sexting		No	None
Nodes\\Nature of Cyberbullying\Duration		No	None
Nodes\\Participation in Cyberbullying		Yes	None
Nodes\\Participation in Cyberbullying\Playfulness		No	None
Nodes\\Participation in Cyberbullying\Roles diffusion		No	None
Nodes\\Participation in Cyberbullying\Trust		No	None
Nodes\\Significant systems affecting Cyberbullying		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Exosystem		Yes	Orange
Nodes\\Significant systems affecting Cyberbullying\Exosystem\Economy		No	None
Nodes\\Significant systems affecting Cyberbullying\Exosystem\Legal system		No	None

29/9/2016 11:01

Hierarchical Name	Nickname	Aggregate	User Assigned Color
Nodes\\Significant systems affecting Cyberbullying\Exosystem\Local government		No	None
Nodes\\Significant systems affecting Cyberbullying\Exosystem\Mass media		No	None
Nodes\\Significant systems affecting Cyberbullying\Exosystem\Social service		No	None
Nodes\\Significant systems affecting Cyberbullying\Macrosystem		Yes	Blue
Nodes\\Significant systems affecting Cyberbullying\Macrosystem\Culture		No	None
Nodes\\Significant systems affecting Cyberbullying\Macrosystem\Heritage		No	None
Nodes\\Significant systems affecting Cyberbullying\Macrosystem\Values		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem		Yes	Purple
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Family		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Family\Divorce		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Family\Socio Economic Status		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Family\Support		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Internet Platform		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Neighborhood		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Peer		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Peer\Hostile relationship		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Peer\Love affairs		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\Peer\Money Affairs		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\School		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\School\Academic performance		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\School\School banding		No	None
Nodes\\Significant systems affecting Cyberbullying\Microsystem\School\Teacher's response		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors		Yes	Green
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Demand		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Demand\Age		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Demand\Gender		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Force		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Force\Motivation		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Force\Persistence		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Force\Temperament		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Resource		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Resource\Computer skill		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Resource\Physical appearence		Yes	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Resource\Social skill		No	None
Nodes\\Significant systems affecting Cyberbullying\Personal Factors\Resource\Social status		No	None

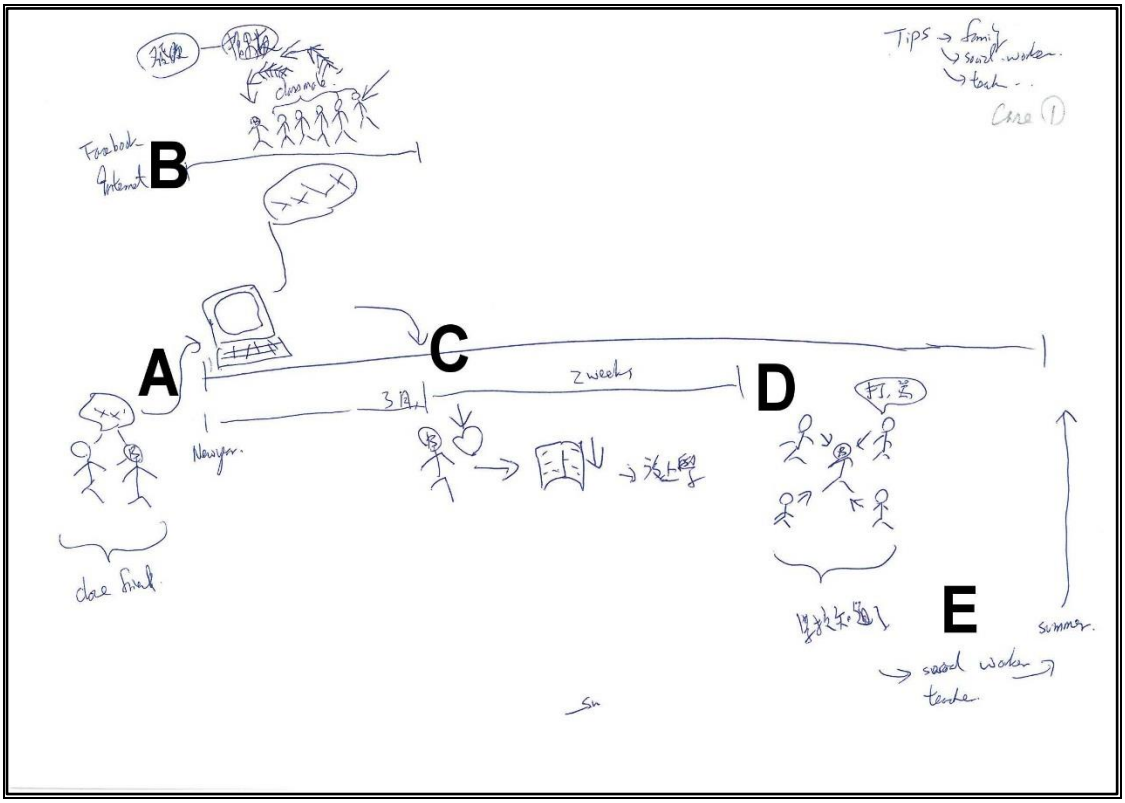
Tree


Cyberbullying.nvp - NVivo
File
Home
Create
External Data
Analyze
Query
Explore
Layout
View
Advanced Find
Query Wizard
Text Search
Word Frequency
Coding
Matrix Coding
Coding Comparison
Compound
Group
Last Run Query
Add to Stop Words List
Run Query
Store Query Results
Other Actions
Find
Create
Actions
Nodes
Nodes
Relationships
Node Matrices
Look for:
Search In
Nodes
Find Now
Clear
Advanced Find
Nodes
Name
Sources
References
Created On
Created By
Modified On
Modified By
Case 5 431 3/11/2015 12:33 W 10/6/2016 13:34 W
Impacts of Cyberbullying 6 106 10/6/2016 13:37 W 10/6/2016 13:39 W
Attitude 3 8 23/11/2015 11:47 W 23/11/2015 12:51 W
Change of participant 2 5 19/7/2016 9:46 W 22/7/2016 17:21 W
Consequence 6 44 26/8/2015 15:15 W 19/7/2016 10:06 W
Help seeking behavior 3 9 19/7/2016 9:47 W 19/7/2016 11:36 W
Linking reality and Cyberworld 3 11 19/7/2016 9:45 W 19/7/2016 11:21 W
Psychological 3 9 9/2/2015 15:43 W 19/7/2016 10:06 W
Response 2 20 22/10/2015 17:39 W 23/10/2015 14:48 W
Nature of Cyberbullying 12 62 19/7/2016 14:11 W 19/7/2016 14:12 W
Behavior 12 54 5/8/2015 11:01 W 19/7/2016 14:15 W
Duration 4 8 26/8/2015 15:18 W 19/7/2016 14:15 W
Participation in Cyberbullying 4 23 19/7/2016 9:43 W 19/7/2016 14:06 W
Playfulness 4 12 19/7/2016 9:44 W 21/7/2016 12:24 W
Roles diffusion 2 4 19/7/2016 9:44 W 19/7/2016 12:31 W
Trust 4 7 19/7/2016 9:45 W 21/7/2016 14:10 W
Significant systems affecting Cyberbullying 10 157 10/6/2016 13:31 W 10/6/2016 13:38 W
Exosystem 4 9 9/2/2015 16:02 W 30/10/2015 15:43 W
Macrosystem 0 0 9/2/2015 16:02 W 30/10/2015 15:45 W
Microsystem 10 140 9/2/2015 15:47 W 12/5/2016 12:09 W
Family 2 10 9/2/2015 15:48 W 12/5/2016 12:08 W
Internet Platform 10 33 26/8/2015 15:21 W 12/5/2016 12:09 W
Neighborhood 0 0 9/2/2015 15:48 W 12/5/2016 12:09 W
Peer 6 62 9/2/2015 15:48 W 12/5/2016 12:08 W
School 3 35 9/2/2015 15:48 W 12/5/2016 12:09 W
Personal Factors 3 8 9/2/2015 15:43 W 30/10/2015 15:45 W
Sources
Nodes
Classifications
Collections
Queries
Reports
Models
Folders
W 73 Items

Appendix 8: Timeline and Metaphor Drawing of Cases

Case 1: Mary 20F

Timeline and metaphor drawing of Case 1 Interview



Timeline Remarks

A. The incident started from a conflict with a close friend about Mary's love affairs at school.

B. The conflict continued and was posted on Facebook, describing Mary as the third person destroying the stable relationship of others. Then, Mary was commented and attacked by a large group of people on Facebook. The conflict on Facebook lasted for three months.

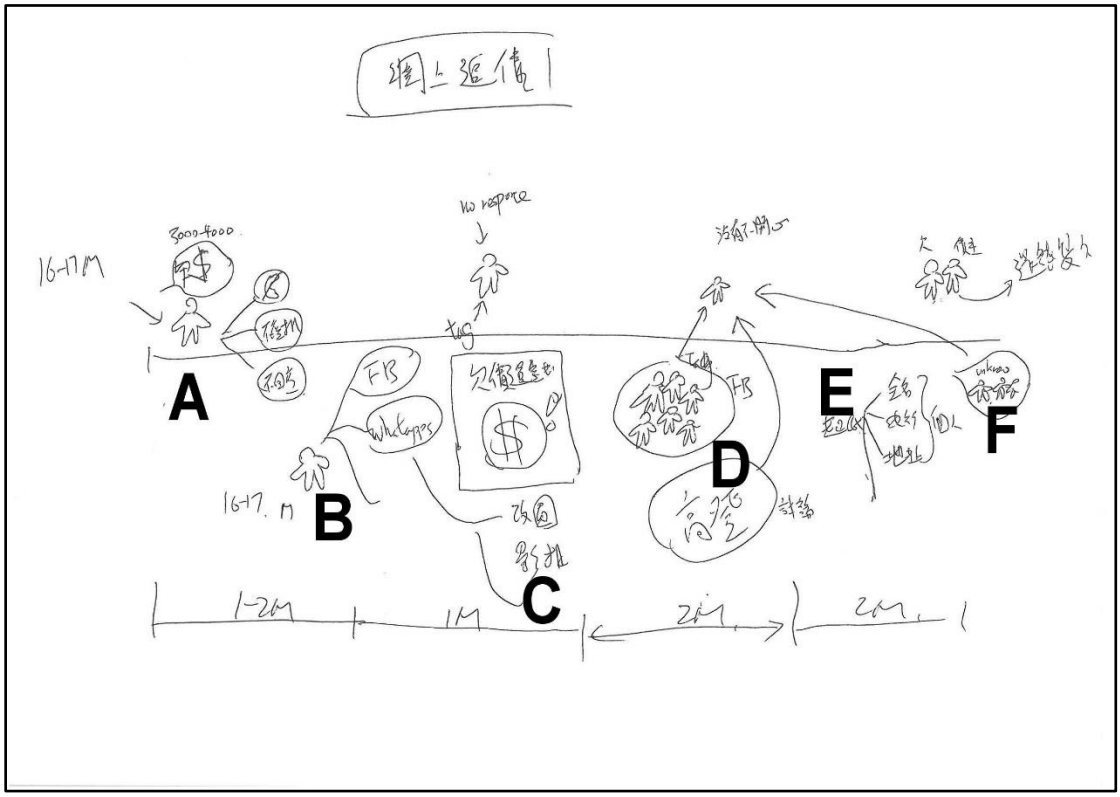
C. After the Facebook conflict, Mary felt sad and her study was affected. Then she skipped school to avoid meeting with her classmates.

D. Mary met the perpetrators in the community and they attacked her verbally and physically.

E. Before the summer holiday that year, the incident was exposed to school and the school social worker intervened. Finally, school teacher suggested that Mary repeat a year of study in order to escape from the incident.

Case 2: Yin 15M

Timeline and metaphor drawing of Case 2 Interview



Timeline Remarks

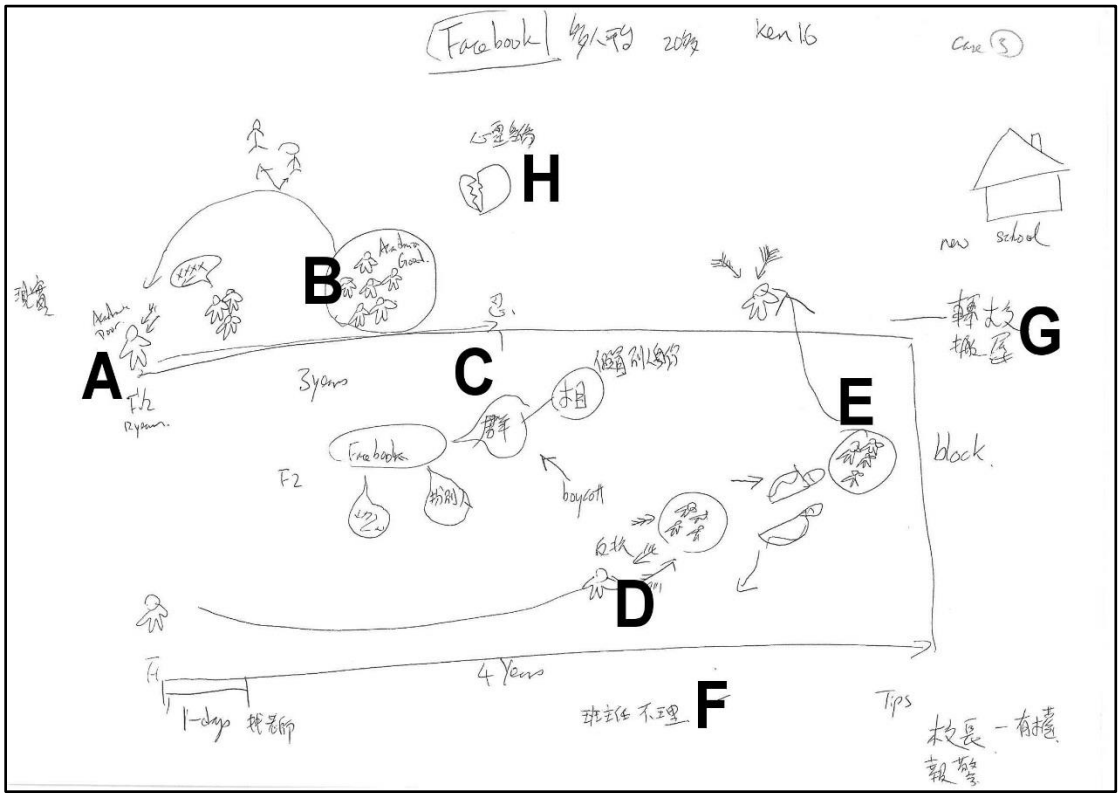
A. The incident began with a money dispute. The target owed Yin HK$4,000 and did not comply with Yin's request for repayment.

B. After a two-month failure in contacting the target (a 16 year-old boy), Yin tried to trace him via Facebook and WhatsApp.

C. Yin posted messages extensively on social media to disclose the money dispute and altered the target's photo to insult him for a month.
D. Then Yin posted the message on the Golden Forum. An increasing number of people were mobilised to label the target as a liar.
E. Two months later, Yin found out the personal information of the target with the help from a local hacker hanging around on the Golden Forum. Then, Yin disclosed the target's personal information in detail on the internet to force him pay the money.
F. Finally, the target paid the full debt to Yin.

Case 3: Ken 16M

Timeline and metaphor drawing of Case 3 Interview



Timeline Remarks

A. Ken was the victim of bullying since promoting to secondary school.

B. Some students with good academic performance grouped together to bully other students.

C. Ken was one of the victims in school. He chose to endure the bullying in reality. In secondary two, the bullying was extended into cyberworld. The perpetrators created Facebook accounts by using classmates' names and photos to post embarrassing messages to make fun and humiliate the victims. Moreover, the perpetrators excluded some classmates by not allowing them to join Facebook groups.

D. As Ken decided to resist the perpetrators in cyberworld, Ken's actions attracted more attacks on him in cyberworld afterward.

E. Then the revenge action cycled back to the real world; the perpetrators attacked Ken in school again.

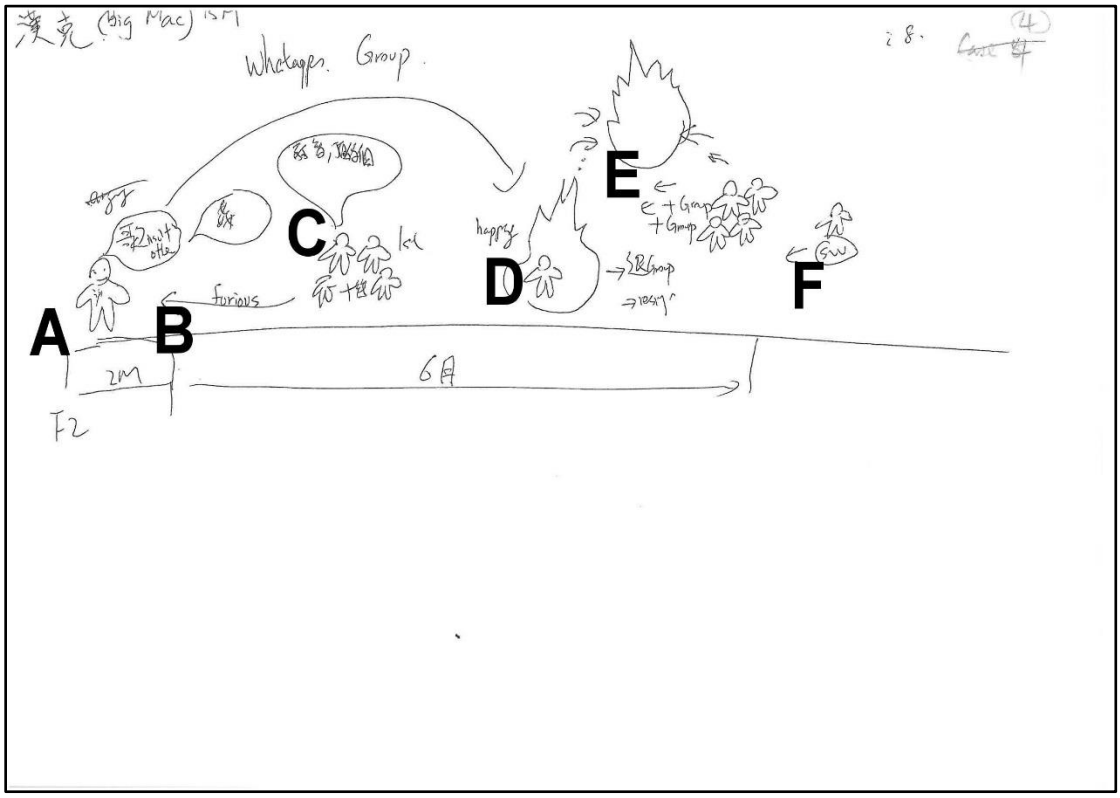
F. The whole incident lasted for four years. Ken reported the bullying incident to school teacher on the first day of bullying. However, his school teacher did not take it seriously, because no physical violence was involved. The teacher just told the perpetrators to stop the bullying in school; however, no action was taken to stop the bullying in cyberworld.

G. The incident ended when Ken moved to another community and changed school.

H. Ken felt sad and the incident broke his heart. He thought that the psychological hurt was very serious, and he would not forget it for the rest of his life.

Case 4: Zurg 15M

Timeline and metaphor drawing of Case 4 Interview



Timeline Remarks

A. The incident happened in a WhatsApp group. The conflict began with Zurg's improper message in his class' group.

B. Zurg irritated most of the classmates after two months, by posting sexting and harassing messages in the group.

C. Zurg's classmates grouped together to fight back and tease Zurg in the WhatsApp group.

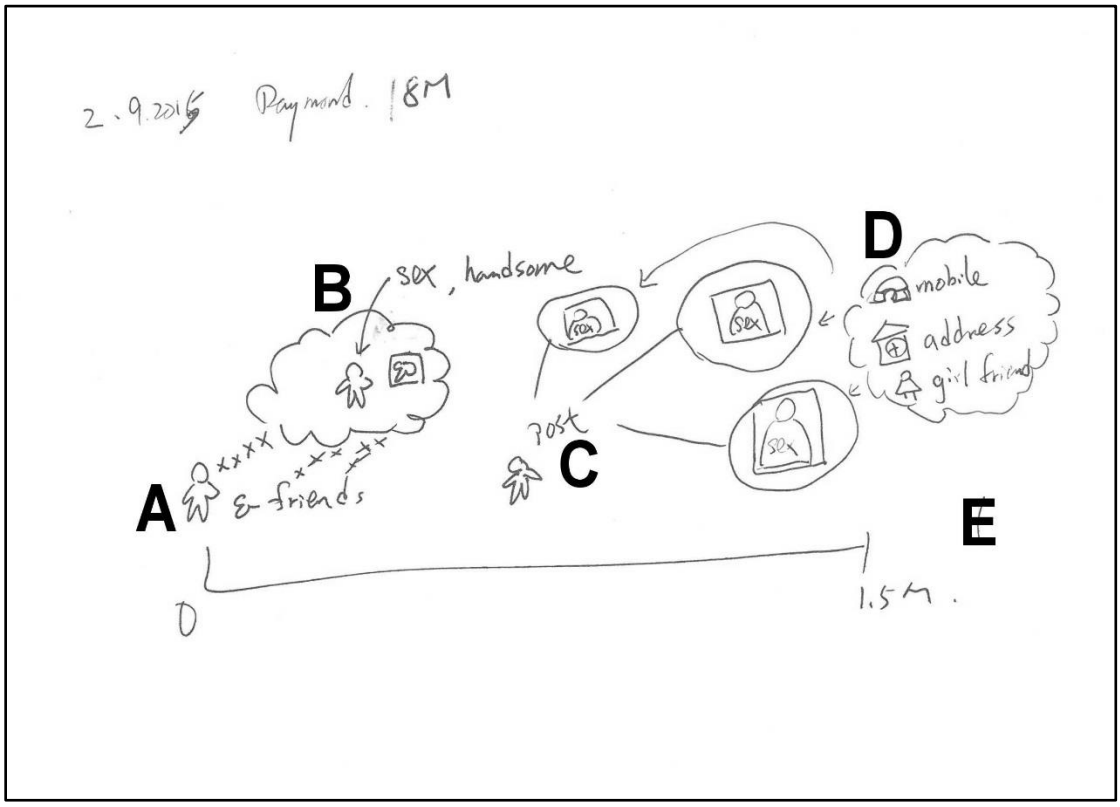
D. Zurg felt sad and furious as his classmates teased him. He left the group by himself.

E. Zurg's classmates found it was very funny to make Zurg angry. They added Zrug into the group repeatedly. More and more classmates joined the group for fun.

F. The conflict lasted for six months, the bullying was stopped when a social worker became aware of the incident and intervened.

Case 5: Raymond 18M

Timeline and metaphor drawing of Case 5 Interview



Timeline Remarks

A. The incident started from a young person posting sexting information and intimate photographs on the internet. Raymond and his friends commented on the behaviour.

B. However, the person continues his action to invite girls to be his sex partner openly in the web.

C. Then Raymond copied and posted the message and his comments on different websites and forums.

D. The personal information about the person was disclosed, including home address, telephone, name of girlfriend, etc.

E. Finally, the person disappeared from the web.

Appendix 9: Phase Two Pilot Study and Feedback

Young people's social interaction in Cyberworld
Phase Two
Pilot test result and respondents' comment

Date	:	12-23Dec2015
Response	:	37
Age	:	9-24
Gender	:	Female 15, Male 19
Education	:	2 Primary, 4 Junior Secondary, 4 Senior Secondary,24 Tertiary

Time to complete the survey : 5 to 12 minutes

Comment from respondents

General comment

The respondent find the survey introduction is good enough to provide a good understanding of their right of withdrawal and privacy protection. Most of the respondent replied that the length of the survey is appropriate, only 2 respondents from tertiary education commented that the survey is too long.

In general, the respondent can understand the description and question related to cyberbullying. However, more clear definition are needed for the following concepts such as online friend, social interaction.

Comment on survey question

Cyberbullying questions

1 The number of online friend
   - 1.1 Can't input zero
   - 1.2 More easy to answer by range instead of exact number
   - 1.3 More clear definition on "online friend" is needed.
   - 1.4 More clear definition on "social interaction" is needed.
2 Q.30 – Q39 : The 10 point rating is too much to manage, 5 points is better.
3 Question logic (if-statement question)
   - 3.1 Q.25 if answer is no, the respondent should skip Q.26
   - 3.2 Q.27 if answer is no, the respondent should skip Q.28 & Q.29

Psychological status questions

4 Online time question: The unit of online time is better to use hour instead of minutes.
5 DASS21 Questions: "Often" and "Always" are similar

Revision related to Cyberbullying questions

1. The number of online friend (a brief description on online friend will be provided, "A friend with interact in cyberworld, no matter they know each other in reality or not")
   - 1.1 Can't input zero (delete the related rule)
   - 1.2 Use of range instead of exact number
     - ☐ No online friend
     - ☐ Less than 100 online friends
     - ☐ 100 to 500 online friends
     - ☐ 501 to 1,000 online friends
     - ☐ Over 1,000 online friends
   - 1.3 Refer to 1
   - 1.4 Provide a brief description on Social interaction, "Social interaction is the way people communicate and act with each other."
2. Q.30 – Q39 change to 5 point rating
3. Question logic
   - 3.1 Provide clear instruction to skip question if the answer is no
   - 3.2 Ditto

Appendix 10: Phase Two Survey Questionnaire

1

青少年在网络世界的社交情况 问卷编号:_____

广州青宫，澳门街坊会联合总会，香港游乐场协会 合办

您好！我们是穗港澳三地的社会服务机构，现正进行一项青少年在网络世界的社交情况调查，您由本地青少年服务机构随机抽样资料选出。您的参与纯属自愿，您亦可以拒绝回答任何问题。当完成问卷后表示您愿意参与是次研究。是次研究不会收集任何可辨认您的个人资料，包括姓名、电话及IP地址等，所有研究数据均按本地个人私隐法规处理。如有任何疑问请联络本人或研究顾问。 您的参与将有助我们了解青少年在网络世界的现况及需要，使我们可建议政府或机构为青少年提供更合适切的服务。

以下问题有关您在网络世界的社交情况?

1. 下列是您使用的网络社交平台吗? (请☑您的答案,可选多项)

☐ WhatsApp	☐ Instagram
☐ Line	☐ Twitter
☐ QQ	☐ 微博
☐ 微信 WeChat	☐ 网络游戏
☐ Facebook	☐ 其他 _____

2. 您在社交网络认识的朋友有多少?

☐ 没有网友

☐ 少于100网友

☐ 100至499 网友

☐ 500至1,000网友

☐ 超过 1,000网友

以下问题有关您过去一年在网络世界的社交情况 (请在下列方格中 ✓您的情况)

	没有	一至二次	几次	常常
3. 您在网络世界的中有社交联系吗?				
4. 您曾在网络世界认识到现实中不认识的新朋友吗?				
5. 您曾在网上对某人发出刻薄、取笑或伤人的话吗?				
6. 在网上曾有人对您发出刻薄、取笑或伤人的话吗?				

2

	没有	一至二次	几次	常常
7. 您曾未经某人同意下，在互联网发布或转发他/她的照片、个人资料、邮件等私人信息?				
8. 在网上曾有人未经您同意下，转发您的照片、个人资料或邮件等私人信息?				
9. 您曾在网上发布关于某人一些不真实的讯息 ，用以攻击或使对方难堪?				
10. 别人曾在网上发布一些关于您的不真实讯息 ，用以攻击或使您难堪?				
11. 您曾经在网上贴出某人的改图，用以取笑或使对方尴尬?				
12. 别人曾经在网上贴出您的改图，用以取笑或使您尴尬?				
13. 您曾经在网上以粗言秽语和别人争吵?				
14. 别人曾经在网上以粗言秽语和您争吵?				
15. 您曾经在网上对某人发送色情或性暗示图像或视频，希望使对方尴尬?				
16. 您曾经在网上收到对别人发送的色情或性暗示图像或视频，希望使您尴尬?				
17. 您曾经对不知情的受害者进行人身攻击并拍摄过程，然后通过互联网传播?				
18. 您曾被某人人身攻击并拍摄过程，然后通过互联网传播?				
19. 您曾经在网上假装某人，并发放使人尴尬或惊吓的讯息?				
20. 您曾被人在网上冒认，发放使人尴尬或惊吓的讯息?				
21. 您曾经在网上发出粗鲁或可怕的讯息来恐吓别人?				
22. 曾经有人在网上用粗鲁或可怕的讯息来恐吓您?				
23. 您曾经在网上抵制某人或将他排除在组群之外?				
24. 您曾经在网上被人抵制或将您排除在组群之外?				

网络欺凌是指有人在网上持续地，作弄或伤害受害人为目的之行为。(请✓您的情况)

25. 您曾经在网络欺凌他人吗?

☐ 没有(跳至 27题) ☐ 一至二次 ☐ 几次 ☐ 常常

3

26. 如果有，您在网络欺凌他人的主要原因是？(可选多项)

☐ 报复 ☐ 发泄愤怒

☐ 他们是应得的 ☐ 展示力量

☐ 因为其他人亦是如此 ☐ 我恨他们

☐ 有趣 ☐ 其他_____

☐ 因为他们在学校招惹了我

27. 我曾经被人在网络欺凌.

☐ 没有(跳至 30题) ☐ 一至二次 ☐ 几次 ☐ 常常

28. 如您曾经历网络欺凌，最近一次欺凌您的是何人? (可选多项)

☐ 朋友 ☐ 在网上认识的人

☐ 学校某人 ☐ 陌生人

☐ 前朋友 ☐ 多人

☐ 前女友/前男友 ☐ 其他_____

29. 如您曾经历网络欺凌，您如何面对? (可选多项)

☐ 关计算机 ☐ 寻求他人帮助

☐ 拦截欺凌者 ☐ 不做任何事

☐ 改网名或电邮 ☐ 其他_____

☐ 离开网络

30. 如遇上网络欺凌事件，您会向甚么人求助? (可选多项)

☐学校师长 ☐警方

☐父母/长辈 ☐自己处理

☐朋友 ☐其他_____

☐社工

以下问题是有关您的个人能力以及与身边人的关系，请圈出③您认为自己的分数

31. 您与父母的关系是 非常差 1-----2-----3-----4-----5 非常好
32. 您与师长的关系是 非常差 1-----2-----3-----4-----5 非常好
33. 您与同学的关系是 非常差 1-----2-----3-----4-----5 非常好
34. 您与朋友的关系是 非常差 1-----2-----3-----4-----5 非常好
35. 您与邻舍的关系是 非常差 1-----2-----3-----4-----5 非常好
36. 您家的经济状况是 非常差 1-----2-----3-----4-----5 非常好
37. 您使用计算机的能力是 非常差 1-----2-----3-----4-----5 非常好
38. 您的社交能力是 非常差 1-----2-----3-----4-----5 非常好
39. 您的体能是 非常差 1-----2-----3-----4-----5 非常好
40. 您的学业表现是 非常差 1-----2-----3-----4-----5 非常好
41. 您在朋友中的地位是 非常差 1-----2-----3-----4-----5 非常好

4

请小心阅读以下每一个句子，如在「过往一个星期」出现有关情况请在其右方 ☑。答案并无对错之分。请不要花太多时间在某一句子上。

0＝不适用　1＝颇适用，或间中适用　2＝很适用，或经常适用
3＝最适用，或大部份时间适用

	0	1	2	3
D1 我觉得很难让自己安静下来	☐	☐	☐	☐
D2 我感到口干	☐	☐	☐	☐
D3 我好像不能再有任何愉快、舒畅的感觉	☐	☐	☐	☐
D4 我感到呼吸困难（例如不是做运动时也感到气促或透不过气来）	☐	☐	☐	☐
D5 我感到很难自动去开始工作	☐	☐	☐	☐
D6 我对事情往往作出过敏反应	☐	☐	☐	☐
D7 我感到颤抖（例如手震）	☐	☐	☐	☐
D8 我觉得自己消耗很多精神	☐	☐	☐	☐
D9 我忧虑一些令自己恐慌或出丑的场合	☐	☐	☐	☐
D10我觉得自己对将来没有甚么可盼望	☐	☐	☐	☐
D11我感到忐忑不安	☐	☐	☐	☐
D12我感到很难放松自己	☐	☐	☐	☐
D13我感到忧郁沮丧	☐	☐	☐	☐
D14我无法容忍任何阻碍我继续工作的事情	☐	☐	☐	☐
D15我感到快要恐慌了	☐	☐	☐	☐
D16我对任何事也不能热衷	☐	☐	☐	☐
D17我觉得自己不怎么配做人	☐	☐	☐	☐
D18我发觉自己很容易被触怒	☐	☐	☐	☐
D19我察觉自己在没有明显的体力劳动时，也感到心律不正常	☐	☐	☐	☐
D20我无缘无故地感到害怕	☐	☐	☐	☐
D21我感到生命毫无意义	☐	☐	☐	☐

个人资料:

年龄：_____ 岁

性别：☐男　☐女

平均每天上网时间:____小时

学历：　☐ 小学　☐初中　☐高中　☐大专/大学或以上

谢谢您的帮忙。如您因以上问题引致不安，请随时致电我们的辅导服务，再次感谢您的参与!

香港 (852) 2573 3849 广州 (86) 020 18655　澳门 (853) 2836 2607

Young people's social interaction in Cyberworld

We are social services organizations in Hong Kong, Macao and Guanzhou. This is a study on young people's social interaction in Cyberbworld. You are being asked to participate because you are teenager and randomly selected by local research partner. Your participation is voluntary and there is no penalty if you do not participate. You may stop the survey at any time or skip any questions you do not want to answer. By completing this survey, you are indicating that you agree to take part in this study. This survey will not collect any information that will personally identify you such as name, phone number, school name and IP address. All information collected are confidential and abide the local law on personal privacy protection. If you have any queries about the research project or any complaints about your right as a research study participant, you may contact me or our research advisor.

The following questions will be about your own experience in Cyberworld. Through your participation, we hope to understand more about young people and provide suggestions for government and local NGO to design suitable service for the young people in need.

* Required

The following questions are asking your social interaction in Cyberworld.

"Social interaction is the way people communicate and act with each other."

1. What is/are your Cyberworld social interaction platform? (you can select more than one) *

- ☐ WhatsApp
- ☐ Line
- ☐ QQ
- ☐ WeChat
- ☐ Facebook
- ☐ Instagram
- ☐ QQ
- ☐ Twitter
- ☐ Weibo
- ☐ Online games
- ☐ Others _____

2. Please estimate the number of your online friend in Cyberworld?

("Online friend" is people with interact in cyberworld, no matter they know each

other in reality or not")

- ☐ No online friend
- ☐ Less than 100 online friends
- ☐ 100 to 500 online friends
- ☐ 501 to 1,000 online friends
- ☐ Over 1,000 online friends

The following questions is about your social interaction in Cyberbworld for the last year.

3. Do you have social interaction in Cyberworld?*

- ☐ Never
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

4. Will you make new friend in Cyberworld you haven't know in reality?

- ☐ Never
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

5. Have you posted mean, teasing or hurtful things about someone online?

- ☐ Never
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

6. Has someone posted mean, teasing or hurtful things about you online?

- ☐ Never
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

7. Have you ever posted or forwarded private information about someone on the Internet without his/her consent?

- ☐ Never
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

8. Has someone forwarded my private e-mail, photos, personal data or messages to another person without my consent?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

9. Have you ever posted untrue things or lies about someone online?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

10. Has someone posted untrue things or lies about you online?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

11. Have you ever posted altered pictures to tease or embarrass someone online?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

12. Has someone altered your picture to tease or embarrass you online?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

13. Have you ever used bad language online towards a particular individual?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

14. Has someone used bad language on you online towards a particular individual?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

15. Have you sent sexually explicit or sexually suggestive images or video through Internet?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

16. Have you received sexually explicit or sexually suggestive images or video through Internet?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

17. Have you physical assault on unsuspecting victims and recorded then spreading through Internet?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

18. Has someone has physical assault on and recorded then spreading through Internet?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

19. Have you pretended to be someone and post/sending messages online to embarrass or frighten someone?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

20. Has someone used your account or pretended to be you to post/send messages to embarrass you?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

21. Have you ever sent rude or scary things to frighten someone on Cyberworld?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

22. Have you received rude or scary messages to frighten you online?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

23. Have you excluding someone from an online group?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

24. Is someone is excluding you from an online group?

☐ Never
☐ Once or twice
☐ A few times
☐ Many times

When someone repeatedly makes fun or does hurtful things on another person online. This is Cyberbullying

25. I have cyberbullied others

☐ Never (Skip Q.26, go to Q.27)
☐ Once or twice
☐ A few times
☐ Many times

26. If so, what was the most important reason for cyberbullying that person? (you can select more than one) *

☐ to get revenge
☐ they deserved it
☐ because others were doing it
☐ for fun
☐ because they picked on me at school
☐ to vent my anger
☐ to demonstrate power
☐ I hate them
☐ other reasons _____

27. I have been cyberbullied

- ☐ Never (Go to Q.30)
- ☐ Once or twice
- ☐ A few times
- ☐ Many times

If you have ever been cyberbullied, tell us about the most recent experience.

28. Did you know who it was who did this to you? (you can select more than one) *

- ☐ friend
- ☐ someone else from school
- ☐ ex-friend
- ☐ ex-boyfriend or girlfriend
- ☐ someone I knew from Cyberworld
- ☐ stranger
- ☐ many people
- ☐ other
- ☐ No one has ever cyberbullied me

29. How did you respond to the cyberbullying experience?

- ☐ logged off computer
- ☐ blocked bully
- ☐ changed screen name or email
- ☐ left site
- ☐ called the police
- ☐ did nothing
- ☐ did something else
- ☐ No one has ever cyberbullied me

30. You will seek help form the following person in Cyberbullying incident. (you can select more than one) *

- ☐ School Teacher
- ☐ Parent / Family member
- ☐ Peer
- ☐ Social worker
- ☐ Police
- ☐ I will handle by myself
- ☐ Others

The following questions are measuring your social relationship and skill in reality.

31. Please rate your relationship with your parent.

1 2 3 4 5
Very Poor Very Good

32. Please rate your relationship with your school teacher

1 2 3 4 5
Very Poor Very Good

33. Please rate your relationship with your classmate.

1 2 3 4 5
Very Poor Very Good

34. Please rate your relationship with your peer.

1 2 3 4 5
Very Poor Very Good

35. Please rate your relationship with your local community.

1 2 3 4 5
Very Poor Very Good

36. Please rate your family financial status.

1 2 3 4 5
Lowest Highest

37. Please rate your computer skill.

1 2 3 4 5
Lowest Highest

38. Please rate your social skill.

1 2 3 4 5
Lowest Highest

39. Please rate your physical ability.

1 2 3 4 5
Lowest Highest

40. Please rate your academic performance.

1 2 3 4 5
Lowest Highest

41. Please rate your social status among your peer group.

1 2 3 4 5
Lowest Highest

The following questions are measuring your latest psychological status.

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.
The rating scale is as follows:

0 Did not apply to me at all - NEVER
1 Applied to me to some degree, or some of the time - SOMETIMES
2 Applied to me to a considerable degree, or a good part of time - OFTEN
3 Applied to me very much, or most of the time - ALMOST ALWAYS

		N	S	O	AA
1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (eg, in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

***Your Age : _____**

***Your Gender : ☐Male ☐ Female**

***Your daily online time (hour):_____**

Your Education level :

☐ Primary

☐ Secondary (Junior)

☐ Secondary (Senior)

☐ Tertiary

Thanks you for your participation. If you have any emotional disturbance aroused, professional counselling services are available for you.

Helping and counseling hotlines:

Hong Kong (852) 2573 3849, Macao (853) 2836 2607, Guangzhou (86)020 18655

Appendix 11: Cyberbullying Behaviour Checklist

Ten types of cyberbullying behaviour were identified in as indicators of the extent of cyberbullying, the following description were used in this study.

1. **Harassment** is posting mean, teasing or hurtful things about someone online.
2. **Outing & Trickery** is posting or forward private information about someone on the internet without his/her consent.
3. **Denigration** is posting untrue things or lies about someone online.
4. **Masquerade** is posting altered pictures to tease or embarrass someone.
5. **Flaming** is using bad and aggressive language online towards a particular individual.
6. **Sexting** is sending sexually explicit or sexually suggestive images or video through the internet.
7. **Happy slapping** is a physical assault on unsuspecting victims that is recorded then spread through the internet.
8. **Impersonation** is pretending to be someone and post/sending messages online to embarrass them.
9. **Cyber stalking** is sending rude or scary things to frighten someone through the internet.
10. **Exclusion** is excluding someone from an online group.

Appendix 12: Cyberbullying Perpetrator Score Items

The cyberbullying behaviour checklist developed in this study as an instrument to measure intentional aggressive behaviour between perpetrators and victims.

Cyberbullying Perpetrator Score

Ten questions are measuring the cyberbullying perpetrator score in this study. The repeat occurrence nature of cyberbullying in our definition was measured by a four points Likert scale from 0=never, 1=one or twice, 2=a few, and 3=many. The average score of the ten questions provides a cyberbullying perpetrator score rank from 0 to 3. The Cyberbullying perpetrator prevalence rate represented the percentage of respondents performing at least once cyberbullying behaviour in the last year.

1. Have you posted mean, teasing or hurtful things about someone online?
2. Have you ever posted or forwarded private information about someone on the Internet without his/her consent?
3. Have you ever posted untrue things or lies about someone online?
4. Have you ever posted altered pictures to tease or embarrass someone online?
5. Have you ever used bad language online towards a particular individual?
6. Have you sent sexually explicit or sexually suggestive images or video through Internet?
7. Have you physical assault on unsuspecting victims and recorded then spreading through Internet?
8. Have you pretended to be someone and post/sending messages online to embarrass or frighten someone?
9. Have you ever sent rude or scary things to frighten someone on Cyberworld?
10. Have you excluding someone from an online group?

Appendix 13: Cyberbullying Victim Score Items

Cyberbullying Victim Score

Ten questions are measuring the cyberbullying victim score in this study. The repeat occurrence nature of cyberbullying in our definition was measured by a four points Likert scale from 0=never, 1=one or twice, 2=a few, and 3=many. The average score of the ten questions provides a cyberbullying victim score rank from 0 to 3. The Cyberbullying victim prevalence rate represented the percentage of respondents suffering at least once cyberbullying behaviour in the last year.

1. Has someone posted mean, teasing or hurtful things about you online?
2. Has someone forwarded my private e-mail, photos, personal data or messages to another person without my consent?
3. Has someone posted untrue things or lies about you online?
4. Has someone altered your picture to tease or embarrass you online?
5. Has someone used bad language on you online towards a particular individual?
6. Have you received sexually explicit or sexually suggestive images or video through Internet?
7. Has someone has physical assault on and recorded then spreading through Internet?
8. Has someone used your account or pretended to be you to post/send messages to embarrass you?
9. Have you received rude or scary messages to frighten you online?
10. Is someone is excluding you from an online group?